

1973

## Clemson Newsletter, 1973-1974

Clemson University

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### Recommended Citation

University, Clemson, "Clemson Newsletter, 1973-1974" (1973). *Clemson Newsletter*. 8.  
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# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 1

August 20, 1973

## Board of Trustees Approves 1973-74 Budget

Clemson University trustees July 26 approved a \$35,429,233 budget for the university's educational and general programs in fiscal year 1973-74.

The Board also approved a \$17,868,711 budget for Clemson's various public service programs in 1973-74.

The major portion of the educational and general budget -- \$27,798,149 -- is allocated for academic programs. Other educational and general items are auxiliary enterprises and affiliated activities, (principally housing and food services), \$7,631,084.

Expenditures for public service programs include agricultural research, \$6,756,931; agricultural extension service, \$8,239,844; regulatory and public service, \$633,423; livestock-poultry health department, \$1,676,991; and forest and recreation research, \$561,522.

These programs bring the total operational budget to \$53,297,944 for 1973-74, compared with \$45,404,746 in 1972-73.

The new budget also contains a \$3,387,786 estimate of revenues earmarked by law for payment on notes and bond indebtedness incurred for permanent improvements, bringing the grant total of contemplated expenditures for 1973-74 to \$56,685,730.

In other matters, the Board agreed to accept the net income from a gift of real property from Mr. and Mrs. Alexander McQueen Quattlebaum to the Clemson University Foundation for support of one or more professorships in the College of Engineering. The McQueen Quattlebaum Professorship will honor Mr. Quattlebaum's father.

In other academic matters, the Board:

-- Approved the appointment of Dr. J.O. Bailey as William James Lemon Professor of Literature for the fall semester of the 1973-74 academic year. Bailey, professor emeritus at the University of North Carolina, is a scholar of international reputation in nineteenth century British literature.

-- Approved the establishment of a department of accounting and finance in the College of Industrial Management and Textile Science, effective July 1, 1974.

-- Rescinded a 1961 policy which discontinued the awarding of bachelor's degrees to pre-professional degree students, and authorized the administration to formulate and implement fair and equitable procedures for awarding the bachelor's degree to students who have attended Clemson and who later enroll in an accredited, post-graduate professional college or university.

In other actions, the Board:

-- Approved routinely several other items, including recodification of a section in the rules and regulations of the Fertilizer Board of Control; contracts for construction of the University Union Building, and covers for holding pens at the Bull Testing Station.

-- Conferred the title of vice president emeritus for development on W. Wright Bryan and the title of vice president emeritus for executive affairs on Allen Wood Rigsby, both of whom are retired and live in Clemson.

## \$30,000 Joe B. Douthit Scholarship Endowment Established

The widow of a leading advocate of conservation in South Carolina for three and a half decades has honored the memory of her husband by establishing an endowment

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM  
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2 . August 20, 1973

valued at about \$30,000 to provide student scholarships in conservation at Clemson University.

Mrs. J.B. Douthit of Daniel Drive, Clemson, presented the gift Friday to Dr. Luther P. Anderson, dean of the College of Agricultural Sciences.

Mrs. Douthit instructed that the endowment "give recognition and assistance to deserving students with a major or minor in the Departments of Agronomy and Soils or Agricultural Engineering or closely related field of study as designated by the dean of the College of Agricultural Sciences."

Scholarship aid to individual students will amount to \$600 annually. Freshmen, sophomores, juniors and seniors are eligible. Awards will be known as "The Joe B. Douthit Memorial Soil and Water Conservation Scholarships."

Mr. Douthit was one of two original farmer conservationists appointed soil conservation district supervisor after the South Carolina District's Law was passed in 1937. He helped form the S.C. Association of Conservation Districts and served as its second president.

After the law regarding membership was changed in 1951, Douthit became chairman of the "all supervisor" committee, now the S.C. State Land Resources Conservation Commission. He served as supervisor in the Upper Savannah, Anderson, and Pickens districts from 1937 until his death earlier this year.

The conservationist was active in regional and national conservation efforts, giving emphasis to research and education, history of the conservation movement, and the role of rural churches in conservation.

In accepting the gift, Dr. Anderson said, "Thousands in this state have been inspired by the soil and water conservation efforts of Mr. Douthit. It is a credit to his devotion that Mrs. Douthit now wishes to continue this work through establishment of the endowment.

## Austin Named Head of ESE Department

Dr. John H. Austin, professor of environmental systems engineering at Clemson University, has been named head of the University's department of environmental systems engineering.

He replaces Dr. John F. Andrews, who will return to full-time teaching and research in the areas of computer control of water and wastewater treatment plants, new biological treatment processes, and development of a statewide system for monitoring the performance of wastewater treatment plants.

## "Pedestrian Campus" Now in Effect at Clemson

The central area of the Clemson University campus will be closed to vehicular traffic from 7:00 a.m. to 5:00 p.m. Monday through Friday. During these hours, Calhoun Drive is closed at both ends of Brackett Hall. South Palmetto Boulevard is closed at the east parking entrance to the Library and at the west parking entrance to the Library.

This new policy, in effect, makes Clemson a "pedestrian campus." Implemented on a trial basis during the second session of summer school, the change allows pedestrian traffic safe, unhampered movement between the east and west areas of the campus during class hours.

According to Master Planner Robert D. Eflin, this move follows several years' study of the traffic flow within the campus area and was recommended in the Clemson University Self Study. Eflin said the transformation to a pedestrian campus is, "one more step toward implementing a more orderly and more easily understood Traffic and Parking Plan for students, faculty and staff, and visitors to the University."

New parking arrangements for resident and commuter students, which include an additional 506 parking spaces, are being implemented this semester.



A new policy governing parking arrangements for the faculty and staff has also been adopted with a target date for implementation set for January 1, 1974. (See policy statement following this article.) It calls for abolition of all reserved parking except for the President of the University and individuals with a severe physical handicap. The new policy follows recommendations of the Faculty Senate and the Educational Council. The change is made possible by the addition of 441 new parking spaces within the academic center of campus so that adequate parking will be available for all members of the faculty and staff. Until January 1 present parking arrangements for faculty and staff will remain in effect.

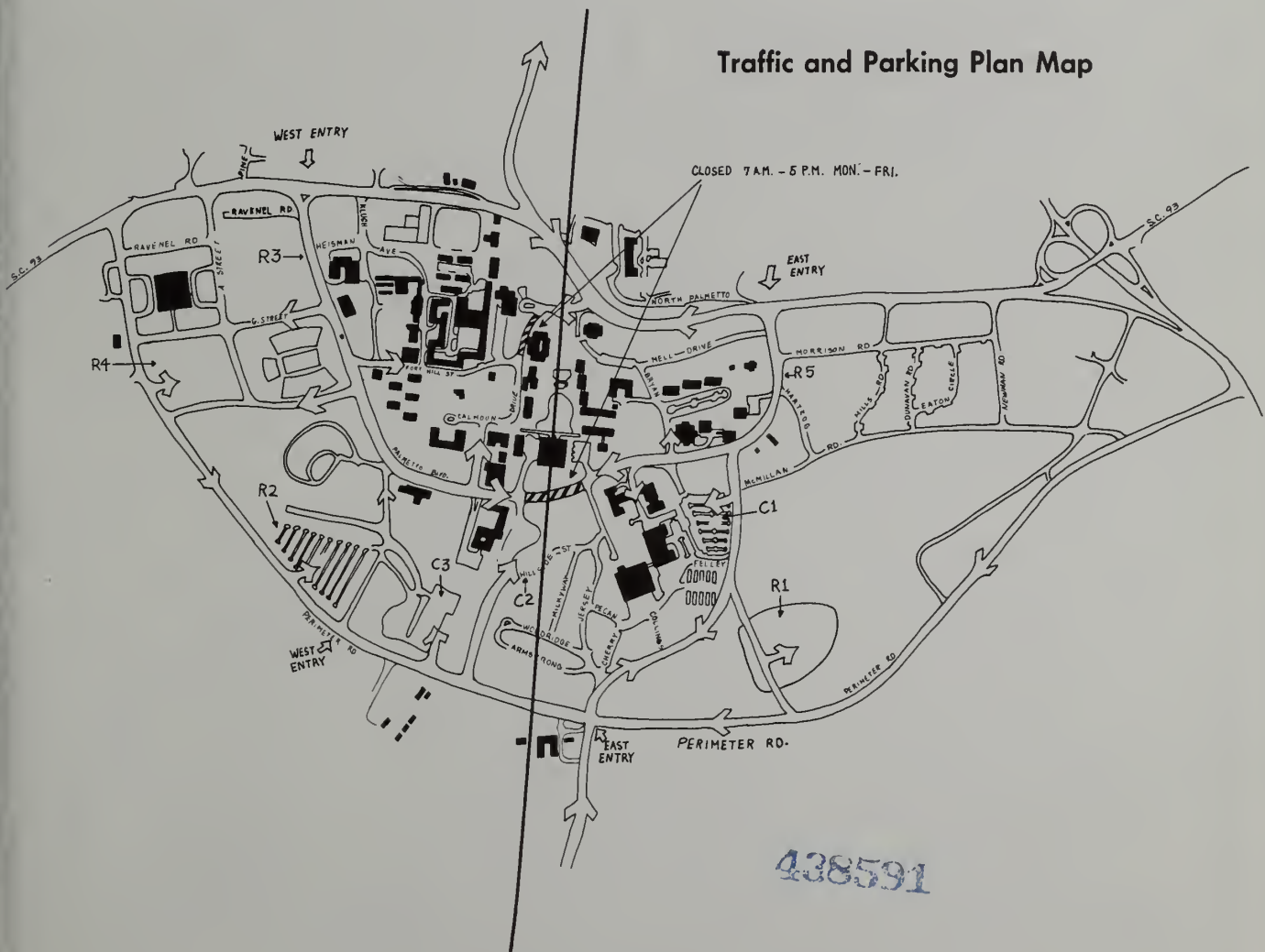
Faculty and staff are urged to study the official Clemson University Parking Map

published by the Physical Plant Division for regulations regarding parking in their area.

The Traffic and Parking Plan calls for a free flow of traffic around the campus, using internal streets and arteries for access only, rather than through routes. The map accompanying this article indicates these main arteries.

Check to see if your parking area is on west or east campus; then check the best route from your home using roads which encircle the campus.

An explanatory "Traffic and Parking Plan" folder, as well as the Physical Plant's official parking map, is being distributed to all faculty and staff members.



## University Parking Policy

### Background

This institutional policy pertaining to University parking arrangements derives from the following recommendations unanimously adopted by the Faculty Senate and the Educational Council:

Faculty Senate, February 13, 1973: "Be it resolved that reserved parking permits be limited to Executive Officers, Full Deans, and physically handicapped persons."

Educational Council, August 6, 1973: "That appropriate individuals develop parking plans which will eliminate any present discrimination in parking for all administration faculty, and staff."

### Objective

It is the goal of the University Administration to achieve equitable parking arrangements whereby each member of the Faculty, Students and Staff will have an adequate parking space.

(Note. The word "Staff" includes every individual in the service of the University other than Faculty and Students.)

### Timing

The goal is to be achieved in two Phases:

Phase I. (Effective August 20, 1973)

- (A) Separately designated parking areas for Resident Students and for Commuter Students.
- (B) Continue present parking arrangements for Faculty and Staff.

Phase II. (Projected effective date of January 1, 1974.)

- (A) Resident and Commuter Students continue parking as in Phase I with improvements as feasible and as indicated by experience.
- (B) Faculty and Staff:
  - (1) Reserved parking abolished except for the President of the University and individuals with a severe physical handicap. (Procedure for assignment of parking space for handicapped individuals is set forth in Chapter 3, Section 7 of the Clemson University Traffic Code.)
  - (2) Designation of specific parking areas for each University organizational unit, each such area to be determined in the most equitable manner, subject to geographical and physical limitations.
- (C) Timed parking will be designated as necessary throughout the campus.

ImplementationVice President for Development:

- (A) Utilizing the services of the Director of Planning and Corporate Relations and the Campus Master Planner, determine the requirements for Faculty and Staff parking for each University building. This will be accomplished during the annual campus physical facilities inventory to be conducted during the month of September, 1973. Concurrently determine total campus parking spaces available for Faculty and Staff.
- (B) In cooperation with the Vice President for Academic Affairs and appropriate administrators in the non-academic areas of the University, determine specific Phase II parking areas for each University unit which will accommodate all Faculty and Staff members of each unit.
- (C) Determine Phase II parking area(s) for Staff members for whom responsible.
- (D) In coordination with the other Vice Presidents determine the number and location of timed parking spaces.
- (E) Conduct continuing study and analysis of the implementation of Phase II parking arrangements with a view to further refinement and improvements.

Vice President for Student Affairs:

- (A) Prior to August 20, 1973 prepare and mail to all students:
  - (1) suitable maps showing specific parking areas for resident and commuter student vehicles, and (2) appropriate informational material explaining Phase I student parking areas.
- (B) In coordination with the Vice President for Development, determine the Phase II parking area(s) to be utilized by Staff members for whom responsible.

Vice President for Academic Affairs:

In coordination with the Vice President for Development and with the academic Deans, determine the specific Phase II parking areas to be utilized by the Faculty, and by members of the Staff for whom responsible.

Vice President for Business and Finance:

- (A) In coordination with the Vice President for Development, and utilizing the services of the Physical Plant Division, determine and install suitable directional traffic signs, parking area designations and markings and issue suitable vehicle identifications to facilitate efficient and timely enforcement of parking regulations.
- (B) In coordination with the Vice President for Development determine the Phase II parking area(s) to be utilized by Staff members for whom responsible.



Vice President for Executive Affairs:

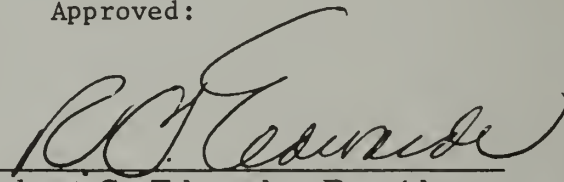
Effective August 20, 1973, the University Traffic and Parking Committee will serve as an advisory body to the Vice President for Executive Affairs on all matters concerning traffic and parking. (This policy will require amendments to all University publications which reflect this responsibility as resting with the Vice President for Business and Finance.)

Future Parking Arrangements

It is the policy of the University that individual members of the Faculty, the Student Body and the Staff, and any committees or bodies representative of the Students, Faculty and Staff, are encouraged to submit constructive suggestions for improvement of parking arrangements to the University Traffic and Parking Committee.

Executive Officers, August 9, 1973

Approved:

  
Robert C. Edwards, President

**Clemson and Wofford Establish  
"Dual Degree" Program**

Clemson University and Wofford College have announced the establishment of a cooperative "dual degree" program in liberal arts and engineering that will enable students to receive undergraduate degrees in both fields after five years of study.

The dual degree, or "3-2" program -- so called because a participant spends his first three years at Wofford and last two at Clemson -- gives a student a bachelor of arts degree from Wofford and a bachelor of science degree in engineering from Clemson.

Dr. Lyle C. Wilcox, dean of Clemson's College of Engineering, says the new program may be the first step in developing a network that will wed Clemson's undergraduate engineering programs with liberal arts colleges throughout the state.

Dean of Wofford College Dr. B.G. Stephens said, "The faculty and staff of Wofford are happy to enter into this agreement with the College of Engineering at Clemson. Such a program gives South Carolina resi-

dents a chance to remain near their home and combine the excellent features of a liberal arts college like Wofford with the superb facilities and faculty of a large and established university like Clemson.

"Students entering this combined 3-2 program no doubt will benefit from the different atmospheres of both kinds of campuses," he said.

**Five R.F. Poole Alumni  
Scholars Named**

Five academically superior students have been named R.F. Poole Alumni Scholars at Clemson University.

They are Cynthia L. Griffith of Summer-ville, Edward R. Stevens Jr. of Spartan-burg, Lydia Carleton Turner of Wilmington, N.C., and Elizabeth Ann Pinson of Greenwood, all freshmen; and Sara Edna Cromer of Seneca, a rising senior.

The freshmen scholars will each receive a \$1,250 scholarship renewable each year if scholastic achievement remains satis-

factory, making the award worth a total of \$5,000 for each student over the next four years.

Miss Cromer, who ranks highest scholastically in the junior class with a 4.0 cumulative GPR, will receive a \$1,000 award.

Usually four awards are made annually to incoming freshmen. This year the fifth award was made possible because a previously named scholar finished in three years.

The awards are sponsored by the Clemson Alumni Association through its Loyalty Fund Program. They are the University's most prestigious academic awards.

Scholarship alone is the determining factor in the selection of scholars to honor the memory of Clemson's seventh president, the late Dr. Robert Franklin Poole, who was chief administrator from 1940-58.

#### **National and Restricted Test Dates Announced by Counseling Center**

The Clemson University Counseling Center has announced the following test dates for national and restricted tests which will be administered during the 1973-74 academic year:

Admission Test for Graduate Study in Business: November 3, 1973  
January 26, 1974

Architectural School Aptitude Test:  
December 15, 1973  
February 9, 1974

Dental Aptitude Test:  
October 12, 1973  
January 12, 1974  
April 20, 1974

Graduate Record Examination:  
October 27, 1973  
December 8, 1973  
January 19, 1974  
April 27, 1974  
June 15, 1974

Graduate School Foreign Language Test:  
October 27, 1973  
January 19, 1974  
April 27, 1974  
June 15, 1974

Medical College Admission Test:  
September 29, 1973  
May, 1974 (Day to be announced)

The following special tests are given by appointment and for a fee:

American Institute of Certified Public Accountants, Aptitude and Achievement Test;  
College-Level Examination Program (English, Chemistry, Economics, Psychology);  
Doppelt Mathematical Reasoning Test;  
Miller Analogies Test;  
Minnesota-Engineering Analogies Test;  
Specific tests for students transferring to other colleges and universities.

Students should apply at least five weeks before the test administration date listed above. Applications can be obtained from the Counseling Center.

#### **Fort Hill Shrimp Feast Scheduled for September 5**

The annual Fort Hill Clemson Club lakeside shrimp feast for students, alumni, IPTAY and friends will be held Wednesday, September 5 at 6:00 p.m. Martin's Landing will again be the site for the informal program that will include appearance and preview statements from the new Tiger Football Ringmaster "Red" Parker and Head Basketball Coach Tates Locke.

The date preceeds by three days the 1973 football opener with The Citadel here at Clemson.

Advance tickets are now on sale at the Alumni Center and Fike Field House. Ticket price is \$5. Contingency arrangements have been made in case of rain. Tickets should be purchased in advance since there will be a limited number available.

**"Education Must Be Used  
With High Moral Principles,"  
Edwards Tells Graduates**

Clemson University President Robert C. Edwards told a summer graduation class of 510 Aug. 11 that the "corrosion of decency in power" dominating the news media today can be prevented only when education and knowledge are put to use in an atmosphere of high moral principles.

It is too easy and also incorrect to say that whatever is wrong in contemporary society is the fault of our educational system, Edwards told the group which included the largest number of students, 291, ever to receive advanced degrees at a single Clemson graduation.

"But certain events in the public life of this nation, which are now being revealed on our television screens for all to see, raise the old question: Is education enough? Is it enough for a person to be highly educated in law, economics, electronics, opinion sampling, or in ethical systems, to cite only a few examples, unless he is aware of the proper and legitimate ends to which his knowledge can be used?" he said.

Formal education alone cannot be responsible for the development of values in

society, but without a value system on the part of those who are educated, the possession of an education can be as harmful as it is helpful, Edwards said.

"The corrosion of decency in power is always possible when those in power don't know or don't care what the distinctions are between right and wrong," he said. "Education must always be ruled by integrity, and certainly it must be accompanied by the conviction that to do justly is the only way to act wisely."

Edwards conferred 218 bachelor, one associate in arts, 278 master and 13 doctoral degrees. It was the first time in Clemson history that more graduate degrees than undergraduate degrees were conferred at a graduation ceremony.

Thirty-nine students were cited for outstanding scholastic achievement.

Fifteen ROTC cadets were commissioned second lieutenants. One cadet received an Air Force Commission and 14 received Army Commissions.

Including graduation exercises last December and May, the university awarded 1,847 degrees during academic year 1972-73, a record number granted in one academic year in the institution's history.



## OFFICE OF THE DEAN OF UNDERGRADUATE STUDIES

A copy of a Catalog of Uncommon Facilities in Southern Universities, 1973 may be consulted in the Office of the Dean of Undergraduate Studies. This catalog of uncommon and expensive facilities in Southern universities has been developed by the Southern Regional Education Board in an effort to increase learning and research opportunities. Students and faculty members of colleges and universities in states served by the Board are eligible to use the facilities listed in the catalog. Students and faculty members are encouraged to review the catalog for facilities which might be used in their research or program of studies.

## ANIMAL SCIENCE

The following papers were presented at the annual meeting of the American Society of Animal Science at Lincoln and Clay Center, Neb., July 31-Aug. 2.

"Half Life of Progesterone in Plasma of Gilts," by A. R. Ellicott (Asst Prof).  
 "Estrus and Ovulation in PGF<sub>2a</sub>/PMS Treated Heifers," by J. R. Hill, Jr. (Prof), J. F. Dickey (Assoc Prof, Dairy Sci) and D. M. Henricks (Assoc Prof, Food Sci).

R. J. Wordinger, J. B. Ramsey, J. F. Dickey (Assoc Prof, Dairy Sci) and J. R. Hill, Jr. (Prof) have published a paper, "On the Presence of a Ciliated Columnar Epithelial Cell Type within the Bovine Cervical Mucosa" in the Journal of Animal Science, May 1973.

## ENGLISH

Jerome Mandel (Assoc Prof) has published "Dream and Imagination in Shakespeare," in the winter issue of Shakespeare Quarterly.

Charles L. Montgomery (Instr in Speech) has been named to the prestigious "Committee of Twelve" of the Southern Speech Association. He replaces Arthur J. Fear (Assoc Prof of Speech) who has served for the past several years.

## ENTOMOLOGY AND ECONOMIC ZOOLOGY

B. Merle Shepard (Asst Prof) attended and participated in a symposium in Ecology and Agricultural Production at the University of Tennessee in Knoxville, July 9-13.

T. R. Adkins, Jr. (Prof) attended and delivered a report on the biology and control of biting flies affecting man and animals at the NEC 13, Biting Fly Conference in Ipswich, Mass., July 24-27.

## ENTOMOLOGY AND ECONOMIC ZOOLOGY (Continued)

A paper, "Biology of the Predaceous Earwig, Labidura riparia (Dermaptera:Labiduridae)" by Merle Shepard (Asst Prof), Van Waddill (Grad Res Asst), and W. Kloft (Institut fur Ange wandte Zoologieder Universitat Bonn, Bonn, Federal Republic of Germany) was published in Annals of the Entomological Society of America, vol. 66, no. 4, pp. 837-841, July 1973.

A Grant-in-Aid of \$250 to support research on peach insects has been awarded to G. R. Carner (Asst Prof) by E. I. DuPont de Nemours and Co.

## HISTORY

Three persons from Clemson participated in the International Conference on Computers in the Humanities at the University of Minnesota, July 20-22, presenting these papers during a session on historical studies: J. V. Reel (Assoc Prof), "The Contrariants at Boroughbridge, 1322," Elizabeth P. Jones (Computer Center), "A Use of the Computer in Historical Studies," and R. S. Lambert (Prof and Hd), "South Carolina Loyalists in the War for Independence."

## INTERDISCIPLINARY STUDIES

A. M. Weinstein (Asst Prof) presented a lecture entitled, "Mechanism of Football Injuries" to the 26th Annual Coaching Clinic sponsored by the South Carolina Athletic Coaches Association on Aug. 2 in Columbia.

## MINUTES OF THE FACULTY SENATE

Clemson University Faculty Senate Minutes, 1956-57 through 1972-73 have been placed in the South Carolina Room of the R. M. Cooper Library. The call number is S.C./LD1042.9/C 63. Inquire at the Reference Desk.

## MATHEMATICAL SCIENCES

William H. Ford (Asst Prof) presented a colloquium talk at North Dakota State University, Fargo, N.D. on June 11 entitled, "Energy Methods for the Numerical Solution of Certain Initial-Boundary Value Problems."

## MECHANICAL ENGINEERING

C. A. Brandon (Assoc Prof) presented a paper entitled, "Fluid-Particle Interaction in Two-Phase Turbulent Pipe Flow," co-authored by M. H. Tennant (former Grad Stu) at the joint national meeting of the Fluids Engineering and Applied Mechanics divisions of ASME in Atlanta, June 20-22.

C. A. Brandon presented a paper entitled, "Hyperfiltration Technique Applied to Wash Water Reclamation at elevated Temperatures," co-authored with J. C. Hester (Assoc Prof and Hd) at the Intersociety Conference on Environmental Systems in San Diego, Calif., July 16-19.

T. T. Yang (Prof) gave a series of lectures in June on "Inverse Approach in Diffuser Design" at the following institutions: Technical Headquarters Ebara Mfg. Corporation, Tokyo, Japan, Department of Mechanical Engineering, Keio University, Yokohama, Japan and Tech. Headquarters, Hitachi Mfg. Corporation, Tokyo, Japan.

J. C. Hester (Assoc Prof and Hd) will serve this year as National Vice-Chairman and Chairman-elect of the Mechanical Engineering Division of the American Society of Engineering Education.

## ZOOLOGY

Averett S. Tombes (Assoc Prof) presented a lecture entitled, "Neuro-endocrinology of Invertebrates," to the Department of Anatomy at the Medical College of South Carolina on May 23.

## RESERVE BOOK POLICY

The University Library Committee formulated the policy stated below. During the past year the policy has worked very satisfactorily for both faculty and students.

1. Books will be placed on reserve for "Library Use Only," "Overnight," "Two-Day," and Four-Day."
2. Faculty members are requested not to place books on reserve unless they are essential to their classes. It is also requested that they examine circulation records and eliminate books infrequently used.
3. Faculty members are urged to be more careful in choosing types of reserves when the books are requested so that changes need not be made during the semester.
4. Faculty members are urged to turn in their reserve lists at least two weeks before the beginning of the semester for books to be put on that semester. It would be to the advantage of faculty and students for the reserve lists to be submitted even earlier than two weeks.
5. Faculty members are encouraged to check library holdings before making up reading lists.
6. In order to facilitate the processing of reserve books, the library will process lists in the following order:

First	Books brought in with lists.
Second	Lists with call numbers.
Third	Lists with no call numbers.
7. Faculty members should submit reserve lists for additional books at least a week to 10 days before books are actually needed.
8. Because of interpretation of copyright law, the library will only make one Xerox copy of an article. If more than one copy of the article is needed, copies must be provided by the faculty member and given to the library staff. These will be treated as his personal copies and will be returned to him at the end of the semester.
9. Faculty members must notify the library staff on the form supplied if reserve books are needed for the following semester. Otherwise books will be removed from reserve at the end of each semester. If the books are to be retained, faculty members are urged to re-view circulation records.
10. Other than at the end of the semester, written notification from faculty members must be received before books will be removed from reserve.



NEW FACULTY AND STAFF 1973-74

The following members of the faculty and staff joined the University between August 15, 1972 and August 15, 1973.

College of Agricultural Sciences

Abdalla, Dennis A., Assistant Professor, Horticulture; B.S., University of Maryland; M.S., Clemson University; Ph.D., Rutgers University; Married, two children; (Sandhill Experiment Station) 9843 S. Chelsea Road, Columbia

Addison, Robert L., Jr., Agricultural Statistician, Agricultural Economics; B.S., M.S., Clemson University; Married; 100 Tram Court, Columbia

Aitken, James B., Associate Professor, Horticulture; M.S., Clemson University; Ph.D., University of Florida; Married, one child; Sandhill Experiment Station, Box 1771, Columbia 29202

Baker, Donald N., Alumni Visiting Professor, Agricultural Engineering; B.S., Pennsylvania State University; M.S., Ph.D., Cornell University; Married, four children

Bursey, Robert G., Assistant Professor, Food Science; M.S., Medical College of Georgia; Ph.D., Clemson University; Married, two children

Carter, George E., Jr., Postdoctoral Fellow, Plant Pathology and Physiology; B.S., M.A., Wake Forest University; Ph.D., Clemson University; Married; 108 Pressley Street

Cross, Dee L., Assistant Professor, Poultry Science; B.S., Austin Peay State University; M.S., Ph.D., University of Kentucky; Married, one child; Route 2, Dogwood Heights, Pendleton

Dick, John W., Assistant Professor, Poultry Science; B.A., Tabor College; M.S., Ph.D., Kansas State University; Married; Box 3, Route 3, Nordlac Estates, Central

Foster, Roger M., State Agricultural Statistician, Agricultural Economics; B.S., South Dakota State University; Married, two children; 6033 Crabtree Road, Columbia 29206

Griffin, Randall P., Instructor, Extension Entomology; B.S., M.S., Clemson University; Married; Six Mile

Hair, Jay D., Assistant Professor, Wildlife Biology; B.S., M.S., Clemson University; Ph.D., University of Alberta; Married

Holloway, Rodney L., Assistant Professor, Entomology and Economic Zoology; B.S., Ouachita Baptist University; M.S., University of Arkansas; Ph.D., Texas A&M University; Married, one child; Calhoun Street



NEW FACULTY AND STAFF 1973-74 (Continued)

Heitmann, John A., Agricultural Chemical Services; B.S., Davidson College; Married; G-3 Robin Hill Apartments

Horton, Paul M., Assistant Entomologist, Plant Pest Regulatory Services; B.S., M.S., Clemson University; Married, one child; Pumpkintown

Jenkins, Joyce H., Instructor, Home Economics; B.S., Winthrop College; MEd., University of North Carolina at Greensboro; Married; Isaqueena Apartments

Jordan, Frances, Associate Professor, Home Economics; B.S., Woman's College, University of North Carolina; M.S., Ohio State University; Ph.D., Florida State University; Single; Village Green Apartments

Lewis, Stephen A., Assistant Professor, Plant Pathology and Physiology; B.S., Pennsylvania State; M.S., Rutgers University; Ph.D., University of Arizona; Married; 110 Karen Drive

Mazur, Anthony R., Assistant Professor, Horticulture; M.S., University of Rhode Island; Ph.D., University of Illinois; Married, one child

McMillan, Helen, Instructor, Home Economics; B.S., Auburn University; M.S., Purdue University; Single; 9-B Daniel Drive

Miller, James C., Jr., Administrative Assistant; B.S., M.Ag., Clemson University; Married, one child; 104 Pressley Drive

Mishoe, Stafford M., Instructor, Agricultural Economics and Rural Sociology; B.S., M.S., Clemson University; Married; Cokesbury Garden Apartments K-5, Greenwood 29646

Pertuit, Alton J., Jr., Assistant Professor, Horticulture; M.S., Louisiana State University; Ph.D., University of Maryland; Single; Royal Oaks Apartments

Rice, James S., Assistant Professor, Agronomy and Soils; B.S., M.S., University of Tennessee; Ph.D., University of Illinois; Married, one child; D-7 Keoway Apartments, Route 2, Seneca 29678

Ridley, John D., Instructor, Agricultural Economics and Rural Sociology; B.S., M.S., Clemson University; Single; Route 1, Mountain Rest 29664

Roberts, Kenneth J., Assistant Professor, Agricultural Economics and Rural Sociology; B.S., M.S., Louisiana State University; Ph.D., Oregon State University; Married, one child; 217 Fort Johnson Road, Charleston 29407

Rochester, Dewey P., Jr., Agricultural Chemical Services; B.S., Clemson University; Married

Smith, Bill R., Assistant Professor, Agronomy and Soils; B.S., Texas Technological College; M.S., University of Arizona; Ph.D., N. C. State University; Married; College Avenue

Smith, Daniel B., Assistant Professor, Agricultural Economics and Rural Sociology; B.S., Auburn University; M.S., University of Tennessee; Ph.D., University of Kentucky; Married, two children; P.O. Box 29, Clemson

NEW FACULTY AND STAFF 1973-74 (Continued)

Sullivan, Michael J., Assistant Professor, Entomology; B.S., Texas Tech University; M.S., Ph.D., N. C. State University; Married, one child; Box 247, Blackville (Edisto Experiment Station)

Thompson, Carl S., Assistant Professor, Agricultural Economics and Rural Sociology; B.S., M.S., Murray State University; Ph.D., University of Kentucky; Married, one child; 103 Pine Ridge Lane

Tinsley, William A., Associate Professor, Agricultural Economics and Rural Sociology; B.S., M.S., University of Illinois; Ph.D., University of Minnesota; Married, two children; 237 Kings Way, Camelot Estates

Titus, Terry C., Assistant Professor, Food Science; M.S., Ph.D., Oklahoma State University; Married; 108 Karen Drive

College of Architecture

Dimond, Thomas W., Coordinator of Educational Media; BFA Massachusetts College of Arts; MFA, University of Tennessee; Married, one child; 523 Hampton Avenue, Greenville

Jacques, John D., Instructor, Planning Studies; B.Arch, Clemson University; Married

Varenhorst, Glenn E., Associate Professor of Planning; B.A., MPA, University of Kansas; M.S., University of Wisconsin; Married, two children

College of Education

Chapman, William S., Major, U.S. Army, Assistant Professor of Military Science; B.S., North Georgia College; MBA, Furman University; Married, four children

Feldman, Jack H., Assistant Professor of Education; B.S., Chicago Teachers College; M.Ed., DePaul University; Ph.D., Miami University; Married, two children; 117 Seabury Drive, Greenville 29607

Hamby, John V., Assistant Professor of Education; B.A., Presbyterian College; M.Ed., Furman University; Married, three children

Mooneyhan, Jack L., LTC, U.S. Army, Assistant Professor of Military Science; B.S., M.S., Clemson University; Married, four children; Route 1, Normandy Shores, Seneca 29678

Raetsch, Barbara M., Assistant Professor of Education; B.S., Winthrop College; M.Ed., University of Georgia; Married; Route 3, Heatherwood, Central

Smith, Benjamin L., Instructor of Industrial Education; B.S., Florida State University; M.InEd., Clemson University; Married, two children; Route 2, Stagecoach Drive, Anderson 29621

Walker, John H., Assistant Professor of Education; B.S., Southwest Missouri State; Ed.D., Southwestern Seminary; M.A., Furman University; Ph.D., The University of Texas at Austin; Married, two children

NEW FACULTY AND STAFF 1973-74 (Continued)

College of Engineering

Bennett, John E., Associate Professor of Electrical and Computer Engineering; B.S., M.S., Ph.D., University of Tennessee; Married, two children

Bryan, J. Kent., Assistant Professor of Electrical and Computer Engineering; B.S., M.S., Ph.D., University of Missouri, Columbia; Married, two children; 105 Allee Street

Komo, John J., Associate Professor of Electrical and Computer Engineering; B.S., M.S. Ph.D., University of Missouri, Rolla; Married, two children

Murray, John M., Instructor, Electrical and Computer Engineering; B.S., M.S., University of South Florida; Married, one child

Whitmire, Jerry A., Administrative Assistant; B.S., Clemson University; Married, two children; Route 1, Pendleton

College of Forest and Recreation Resources

Sabin, Guy E., Assistant Professor of Forestry; B.S., Clemson University; M.F., Yale University; Married, two children; 123 College Heights Boulevard

College of Industrial Management and Textile Science

Acker, James D., Visiting Instructor in Industrial Management; B.S., University of South Carolina; M.Ed., Clemson University; Ed.D., North Carolina State University; Single

Allen, Michael R., Assistant Professor in Industrial Management; B.S., B.A., Auburn University; M.P.A., Georgia State University; Single

Blair, Dudley, Assistant Professor in Economics; B.S., Texas A&M; Married

Burch, Elmer E., Jr., Assistant Professor in Industrial Management; B.S., M.S., Ph.D., Clemson University; Married, two children

Calvasina, Richard V., Assistant Professor in Industrial Management; B.B.A., M.B.A., Ph.D., University of Mississippi; Married, two children

Drews, Alison C., Visiting Lecturer in Industrial Management; B.B.A., C.P.A., University of Wisconsin; M.S., Clemson University; Married; Route 1, Box 698, Central

Glocker, Janet J., Instructor in Economics; B.A., Bridgewater College; M.A., Clemson University; Married, Box 85, Six Mile

Mabry, Rodney H., Instructor in Economics; B.S., University of Kentucky; Married, one child

Mitchell, Theodore W., Part-time Visiting Lecturer in Industrial Management; A.B., Fisk University; J.D., Howard University School of Law; 525 Woodland Way, Greenville

Tarbert, Foard H., Jr., Visiting Instructor in Industrial Management; B.A., Newberry College; Married, two children; 207 Brook Street

NEW FACULTY AND STAFF 1973-74 (Continued)

Waddle, Gerald L., Assistant Professor in Industrial Management; B.A., Baldwin-Wallace College; M.B.A., Kent State University; Single

College of Liberal Arts

Andron, Lillian F., Instructor in Speech; B.S., M.A., New York University; Married; South 4th Street, Seneca

Brainerd, Mrs. Carol F., Assistant Professor of Psychology; B.A., Washington College; M.A., Ph.D., West Virginia University; Married

Brainerd, Jr., Edwin G., Visiting Instructor in Psychology; B.A., Washington College; M.A., West Virginia University; Married

Brubeck, Miss Jean D., Lecturer in English; B.A., College of William and Mary; M.A., Clemson University; Single

Carney, Miss Elizabeth D., Instructor in History; B.A., Smith College; M.A., Duke University; Single; #4 Shorecrest Apartments

Cline, Mickey R., Visiting Instructor in Political Science; B.A., M.A., University of South Carolina; Single

Elliott, Mrs. Nina, Instructor in Psychology; B.A., Knoxville College; M.A., Western Carolina University; Married; The Regency, Apt. #80, Central

Guild, Nicholas M., Assistant Professor of English; B.A., Occidental College; M.A., Ph.D., University of California; Married

Hambrick, Miss Frances H., Instructor in Sociology; B.A., McMurry College; M.A., Texas Tech University; Single

Hingers, Robert H., Instructor in Sociology; B.A., State University of New York; M.S., Virginia Polytechnic Institute and State University; Single

Lurie, Gordon A., Instructor in Sociology; B.A., Temple University; M.A., University of Illinois; Single

Martz, Mrs. Mary R., Assistant Professor of Political Science; B.A., Georgetown College; M.A., University of North Carolina; Ph.D., Duke University

Montgomery, Mrs. Barbara M., Instructor in Speech; B.S., Ball State University; M.A., Memphis State University; Married, one child; 100 Riding Road

Peppers, Larry G., Assistant Professor of Sociology; B.S., M.A., Memphis State University; Ph.D., Oklahoma State University; Married

Pilo, Marvin R., Visiting Instructor in Political Science; B.A., Columbia College; M.A., Teachers College; Married



NEW FACULTY AND STAFF 1973-74 (Continued)

Schwartz, Miss Roberta C., Assistant Professor of English; B.A., Marygrove College; M.A., Ph.D., Wayne State University; Single; Isaqueena Trailer Park, Route 3, Central

Senn, David J., Associate Professor of Psychology; B.A., North Central College; M.A., Northern Illinois University; Ph.D., University of Massachusetts; Married, three children; 112 Lakeview Circle

Stacy, Miss Carey I., Visiting Lecturer in Spanish; B.A., Coker College; M.A., University of North Carolina; Single

College of Nursing

Campbell, Mary J., Mrs., Instructor; B.S.N., University of Kentucky; M.S.N., University of Alabama in Birmingham

Carroll, Jane B., Mrs. Instructor; B.S.N., University of South Carolina; M.N., Emory University

Drew, Jessie, Visiting Instructor; B.S., Alfred University; M.S., Boston University

Fenton, Lucy A., Mrs., Assistant Professor; B.S., Temple University; M.S., University of California, Los Angeles

Lee, Gwendolen, Associate Professor; B.S., Stetson University; M.S., University of Colorado; Ed.D., University of Tennessee

Monahan, Sharon R., Instructor; B.S.N., St. Xavier College; M.S., University of Michigan

Parks, Suzanne L., Mrs., Assistant Professor; B.S., Emory University; M.S., University of Maryland

Thompson, Sharon W., Mrs., Instructor; B.S.N., Murray State University; M.S.N., University of Kentucky

Wagner, Mary M., Assistant Professor; B.S., Villanova University; M.S., University of Pennsylvania

College of Physical, Mathematical, and Biological Sciences

Dyck, Lawrence A., Assistant Professor of Botany; A.B., University of California at Los Angeles; Ph.D., Washington University; Married, two children

Garcia, Crisostomo B., Assistant Professor of Mathematical Sciences; B.S., University of the Philippines; M.S., Ph.D., Rensselaer Polytechnic Institute; Married

Hair, Rebecca M., Administrative Assistant to the Dean; B.A., Queens College; Married

Helms, Doris R., Assistant Professor of Zoology; B.S., Bucknell University; Ph.D., University of Georgia; Married

NEW FACULTY AND STAFF 1973-74 (Continued)

Karamardian, Stepan, Visiting Alumni Professor of Mathematical Sciences; B.S., Syrian University; M.S., University of Illinois; Ph.D., University of California at Berkeley; Married, three children

Lemoine, Austin J., Assistant Professor of Mathematical Sciences; B.S., M.S., Louisiana State University; Ph.D., Stanford University; Married

Lewallen, Richard A., Assistant Professor of Mathematical Sciences; B.S., University of Tennessee at Chattanooga; M.S., Clemson University; Ph.D., Pennsylvania State University; Married, one child

Ling, Robert F., Visiting Associate Professor of Mathematical Sciences; B.A., Berea College; M.A., University of Tennessee; M.Phil., Ph.D., Yale University; Married, one child

Park, George B., Assistant Professor of Chemistry; B.S., Newberry College; M.A., University of North Carolina at Chapel Hill; Ph.D., University of Kansas; Married, one child

Pivorun, Edward B., Assistant Professor of Zoology; B.S., Tufts University; Ph.D., University of Minnesota; Married

Graduate School

Dimmock, Charles, Administrative Assistant, Graduate Studies and University Research; Married, three children; 409 Shorecrest Drive

The Robert Muldrow Cooper Library

Campbell, Della Gail, Assistant Reference Librarian, Social Sciences and Humanities Division; A.B., Central Wesleyan College; M.S., Louisiana State University; Single; Palmetto Trailer Park, Six Mile

Dinwiddie, Martha Rozella, Cataloger; B.A., Clemson University; M.L., University of South Carolina; Single

Triche, Charles W., III, Reference Librarian, Science, Technology and Agriculture Division; B.S., M.S., Louisiana State University; Married; 15 Edgewood Arms Apartments

President's Office

McDevitt, Joseph B., Vice President for Executive Affairs, University Counsel and Secretary of the Board of Trustees; B.A., University of Illinois; J.D., University of Illinois, College of Law; Married, eleven children; P.O. Box 887, Clemson

Office of Business and Finance

Kincaid, William L., Assistant Housing Manager, Family Housing & Auxiliary Services; B.S., Catawba College; Married

Suber, James C., Assistant Superintendent of Grounds, Physical Plant; B.S., Clemson University; Married

NEW FACULTY AND STAFF 1973-74 (Continued)

Development Office

Austin, E. Robert, Radio-TV Editor, Communications Center; B.A., Emory University; M.S., University of North Carolina; Single; 46 Deauville Apartments, Central

Ducker, Vincent, Photographer, Communications Center; Married; Piney Road, Greenville

Harby, Horace D., Director of Deferred Gifts; B.S., Clemson University; Married; 225 Camelot Road

Hendricks, Benjamin T., Photographer, Communications Center; Married

Owens, Shirley, Experiment Station Publications Editor, Public Relations Office; B.A., Appalachian State University; M.S., Clemson University; Married; 49 Southgate Apartment Seneca

Towe, Bob L., Audio-Visual Technician, Communications Center; Single; 106 Fabrica Street

Yandle, Dorothy, Associate News Editor, Public Relations Office; B.A., Wesleyan College; Married; 323 Tamassee Drive

Office of Student Affairs

Adams, Dwight, Assistant Coach, Athletics; B.S., Henderson State University; Married

Carmichael, Marvin G., Administrative Assistant, Financial Aid; B.S., Clemson University; Married

Carter, Ronnie, Assistant Coach, Athletics; B.S., Arkansas A&M; Married

Emory, Edward, Head J.V. Football Coach, Athletics; B.S., M.S., East Carolina State University; Married

English, Regina Albiker, Residence Hall Supervisor, Student Affairs; B.A., University of Delaware; Married

Gilchrist, George M., Residence Halls Manager, Student Affairs; B.S., Clemson University; Single

Johnson, Hulda Theile; Residence Hall Supervisor, Student Affairs; R.N., St. Francis Xavier Infirmary; Widow

McFadden, Monica E., Residence Hall Supervisor, Student Affairs; B.S., Cornell University; Single

Murry, Don, Assistant Coach, Athletics; B.S., Arkansas A&M; Married

Parker, Jimmy Dale, Head Football Coach, Athletics; B.A., Arkansas A&M; Married

NEW FACULTY AND STAFF 1973-74 (Continued)

Saverance, Jane A., Residence Hall Supervisor, Student Affairs; B.A., Clemson University; Single

Steelman, Harold, Assistant Coach, Athletics; B.S., University of Arkansas; Married

Sutherland, James W., Student Affairs Assistant, Student Affairs and Traffic; B.A., Lander College; M.Ed., Clemson University; Single

Wrenn, Clyde, Recruiting Coordinator, Athletics; B.S., North Carolina State University; Married



CALENDAR OF CAMPUS EVENTS

Aug.	15	Wed.		Football practice begins.
Aug.	17	Fri.	8:00 a.m.	Faculty and staff orientation - P&AS.
Aug.	17	Fri.		Summer co-op employment ends, Schedule B.
Aug.	18	Sat.		Individual college orientation.
Aug.	20	Mon.	10:30 a.m.	General faculty and staff meeting.
Aug.	20-	Mon.-		Freshman orientation.
Aug.	21	Tues.		
Aug.	20	Mon.		Fall co-op employment begins, Schedule A.
Aug.	22	Wed.		Registration, all students.
Aug.	22	Wed.	8:00 p.m.	"Cat Ballou," presented by Student Union - Amphitheater.
Aug.	23	Thurs.	8:00 p.m.	Free concert presented by Student Union - Amphitheater.
Aug.	24	Fri.		Classes begin, regular schedule.
Aug.	26	Sun.	8:00 p.m.	W.C. Fields Mini-Festival, presented by Student Union - Holtzendorff YMCA.
Aug.	27	Mon.	5:00 p.m.	Placement orientation for seniors and graduate students - 100 Brackett Hall.
Aug.	30	Thurs.	8:00 - 9:30 p.m.	President and Mrs. Edwards - "At Home" to the faculty and staff.
Aug.	30	Thurs.	2:30 p.m.	Groundbreaking for new Union complex.
Aug.	30	Thurs.	8:00 p.m.	Student Union Street Dance.
Aug.	30	Thurs.	3:30 p.m.	Norman Graebner, Professor, Univ. of Virginia, "Presidential Powers and International Relations," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Sept.	1	Sat.	7:00 p.m.	Student Union Dance-Concert - "Y" Beach.
Sept.	3	Mon.	9:05-11:15 a.m.	Agronomy conference on "Production, Marketing and Use of Nitrogen Fertilizer." A-203 P&AS Bldg.
Sept.	3	Mon.	7:00 p.m.	Spanish film - Daniel Hall Auditorium.

CALENDAR OF CAMPUS EVENTS Continued

Sept.	4-	Tues.-		Architecture exhibit, 60's Continuum
Sept.	28	Fri.		(photography) - Lee Hall Gallery.
Sept.	5	Wed.	6:00 p.m.	Ft. Hill Clemson Club "Shrimp & Sip"- Wilson's Landing (PPD to 6th if raining).
Sept.	6	Thurs.	3:45 p.m.	CU Woman's Club - Clemson House.
Sept.	6	Thurs.	8:00 p.m.	"Mark Twain on Stage," Clemson University Concert Series - Littlejohn Coliseum.
Sept.	8	Sat.	1:30 p.m.	Varsity football - Citadel at Clemson.
Sept.	9	Sun.	2:00 p.m.	Soccer - South Carolina at Clemson.
Sept.	11	Tues.	7:00 p.m.	Bill Bradley, presented by Speakers Bureau - Tillman Hall Auditorium.
Sept.	11-	Tues.-		State Supervisors and Teacher Educators in
Sept.	14	Fri.		Agricultural Education Fall Planning and Evaluation Conference - 100 Tillman Hall.
Sept.	12	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Sept.	13	Thurs.	3:30 p.m.	David Broder, Columnist, Washington Post, "The Press and the Presidency," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Sept.	17	Mon.	7:00 p.m.	French film - Daniel Hall Auditorium.
Sept.	21	Fri.	3:00 p.m.	Soccer - Emory at Clemson.
Sept.	22	Sat.		Cross Country - South Carolina at Clemson.
Sept.	23	Sun.	8:00 p.m.	"400 Blows," Student Union Fine Arts Film - Holtzendorff YMCA.
Sept.	26	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Sept.	27	Thurs.	3:30 p.m.	John B. Anderson, Member of Congress, "A Republican Looks at the Presidency," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Sept.	27	Thurs.		Short course in Plastic Design of Steel Structures.
Sept.	28	Fri.	2:00 p.m.	JV football - Georgia at Clemson.
Sept.	28-	Fri.-	9:00 a.m.	Symposium, "Changes in the S.E.," Daniel Auditorium.
Sept.	29	Sat.		
Sept.	29	Sat.		Medical College Admission Test.

CALENDAR OF CAMPUS EVENTS Continued

Oct.	3	Wed.	3:00 p.m.	Soccer - Furman at Clemson.
Oct.	3	Wed.	7:00 p.m.	Lecture by James McCord, presented by Speakers Bureau.
Oct.	3	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Oct.	3	Wed.		Architecture exhibit - Mills One-Man Show (paintings) - Lee Hall Gallery.
Oct.	4	Thurs.	3:45 p.m.	CU Woman's Club - Clemson House.
Oct.	4	Thurs.	9:00 p.m.	Lester Flatt and the Nashville Grass Concert presented by Student Union - Amphitheater.
Oct.	4-5	Thurs.-Fri.		Annual Air & Water Pollution Control Seminar.
Oct.	6	Sat.	1:30 p.m.	Varsity football - Texas A&M at Clemson.
Oct.	6	Sat.		Cross Country - Ga. Tech at Clemson.
Oct.	8	Mon.	7:00 p.m.	German film - Daniel Hall Auditorium.
Oct.	8-12	Mon.-Fri.		Refractory Manufacturers Short Course.
Oct.	10	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Oct.	11	Thurs.	3:30 p.m.	Morris K. Udall, Member of Congress, "A Democrat Looks at the Presidency," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Oct.	12	Fri.		Dental Aptitude Test.
Oct.	12	Fri.	3:00 p.m.	Soccer - Erskine at Clemson.
Oct.	12	Fri.		Tigerama - Stadium.
Oct.	12	Fri.		Clemson Foundation and Alumni National Council meet - Alumni Center.
Oct.	13	Sat.	1:30 p.m.	Homecoming, Varsity Football- Virginia at Clemson.
Oct.	15	Mon.	3:30 p.m.	Lecture by Thomas E. Cronin - Daniel Auditorium.
Oct.	15	Mon.	9:05-11:15 a.m.	Agronomy conference on "Plant Food Distribution" - A-203 P&AS Bldg.
Oct.	17	Wed.	8:00 p.m.	"Godspell," Clemson University Concert Series - Littlejohn Coliseum.

CALENDAR OF CAMPUS EVENTS Continued

Oct.	17	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Oct.	18-	Thurs.-		Clemson Reading Conference.
Oct.	20	Sat.		
Oct.	19	Fri.	2:00 p.m.	JV football - South Carolina at Clemson.
Oct.	20	Sat.		Meeting of Alumni National Council.
Oct.	20	Sat.		Director's meeting, Clemson University Foundation.
Oct.	20	Sat.		SCCFLT and AAT's (Department of Languages).
Oct.	21	Sun.	2:00 p.m.	Soccer - Appalachian State at Clemson.
Oct.	22	Mon.	9:05- 11:15 a.m.	Agronomy conference on "Production, Marketing and Use of Solid Solution and Suspension Multi-Nutrient Fertilizers I" - A-203 P&AS Bldg.
Oct.	23	Tues.		Spanish play.
Oct.	24	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Oct.	24	Wed.	9:05- 11:15 a.m.	Agronomy conference on "Production, Marketing and Use of Solid Solution and Suspension Multi-Nutrient Fertilizers II" - A-203 P&AS Bldg.
Oct.	24	Wed.	8:00 p.m.	Dallas Symphony Orchestra, Clemson University Concert Series - Littlejohn Coliseum.
Oct.	25	Thurs.	3:30 p.m.	James D. Barber, Professor, Duke University, "Predicting Presidential Character," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Oct.	26	Fri.	3:00 p.m.	Soccer - Georgia State at Clemson.
Oct.	27	Sat.		Graduate Record Examination.
Oct.	27	Sat.		Graduate School Foreign Language Test.
Oct.	27	Sat.	1:30 p.m.	Varsity football - N.C. State at Clemson.
Oct.	28	Sun.	8:00 p.m.	"Golden Age of Comedy," Student Union Fine Arts Film - Holtzendorff YMCA.
Oct.	31	Wed.	3:00 p.m.	Soccer - Duke at Clemson.
Nov.	1	Thurs.	3:45 p.m.	CU Woman's Club - Clemson House.
Nov.	1	Thurs.		Flemmy Competition (Department of Languages).
Nov.	3	Sat.		Admission Test for Graduate Study in Business.

CALENDAR OF CAMPUS EVENTS Continued

Nov.	3	Sat.	1:30 p.m.	Varsity football - Wake Forest at Clemson.
Nov.	3	Sat.	10:30 a.m.- 1:00 p.m.	Chicken Barbecue sponsored by the Alpha Tau Alpha fraternity and the Society for the Advancement of Agricultural Education - Littlejohn Coliseum.
Nov.	4	Sun.	2:00 p.m.	Soccer - South Florida at Clemson.
Nov.	5	Mon.	7:00 p.m.	Speech Night - Daniel Hall Auditorium.
Nov.	5	Mon.	9:05- 11:15 a.m.	Agronomy conference on "The World Bank's Fertilizer Projects: - A-203 P&AS Bldg.
Nov.	6	Tues.	7:00 p.m.	Christine Jorgensen, presented by Speakers Bureau - Tillman Hall Auditorium.
Nov.	7	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Nov.	7- 30	Wed.- Sun.		Architecture exhibit, "Poems and Fibers" (weaving, poetry) - Lee Hall Gallery.
Nov.	9	Fri.	2:00 p.m.	JV football - Georgia Tech at Clemson.
Nov.	10	Sat.		Declamation contest (Department of Languages).
Nov.	12	Mon.	7:00 p.m.	French film - Daniel Hall Auditorium.
Nov.	13	Tues.		Short course in designing with wood.
Nov.	14	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Nov.	14	Wed.	9:05- 11:15 a.m.	Agronomy conference on "Interpretation of Soil and Plant Analyses for Determining Lime and Fertilizer Needs" - A-203 P&AS Bldg.
Nov.	17	Sat.	1:30 p.m.	Varsity football - Maryland at Clemson.
Nov.	18	Sun.	8:00 p.m.	"Orpheus," Student Union Fine Arts Film - Holtzendorff YMCA.
Nov.	19	Mon.	7:00 p.m.	Spanish film - Daniel Hall Auditorium.
Nov.	19	Mon.		Cross Country - NCAA meet.
Nov.	21	Wed.		Thanksgiving holidays begin after last class.
Nov.	21	Wed.	12:00 noon	Ft. Hill QB Club Luncheon - Clemson House.
Nov.	24	Sat.	1:30 p.m.	Varsity football - South Carolina vs Clemson - Columbia.
Nov.	26	Mon.		Classes resume.



CALENDAR OF CAMPUS EVENTS Continued

Nov.	27	Tues.	7:00 p.m.	Buster Crabbe, presented by Speakers Bureau-Tillman Hall Auditorium.
Nov.	30-	Fri.-		Clemson Tip-Off Tournament - varsity basketball
Dec.	1	Sat.		(Clemson, Auburn, Jacksonville & St. John's) - Littlejohn Coliseum.
Dec.	3-	Mon.-		Architecture exhibit, Charles W. Callister
Dec.	21	Fri.		(architecture) Lee Hall Gallery.
Dec.	4	Tues.	8:00 p.m.	St. Louis Jazz Quartet, presented by Student Union - Tillman Hall Auditorium.
Dec.	6	Thurs.	3:45 p.m.	CU Woman's Club - Clemson House.
Dec.	8	Sat.		Graduate Record Examination.
Dec.	10	Mon.		Exams begin.
Dec.	15	Sat.		Varsity basketball - Georgia Tech at Clemson.
Dec.	15	Sat.		Architectural School Aptitude Test.
Dec.	18	Tues.		Varsity basketball - Louisville at Clemson.
Dec.	20	Thurs.		Mid-year graduation.
Dec.	21	Fri.		Fall co-op employment ends, Schedule A.
Jan.	7	Mon.		Spring co-op employment begins, Schedule B.
Jan.	7	Mon.		Short course in construction safety.
Jan.	7-	Mon.-		Brick manufacturers short course.
Jan.	11	Fri.		
Jan.	7	Mon.		Orientation, new students.
Jan.	8	Tues.		Registration, all students.
Jan.	9	Wed.		Varsity basketball - North Carolina at Clemson.
Jan.	10	Thurs.	3:45 p.m.	CU Woman's Club - Clemson House.
Jan.	10	Thurs.		Classes begin, regular schedule.
Jan.	10-	Thurs.-		Architecture exhibit, Mt. Angel Library
Jan.	25	Fri.		(photographs) Lee Hall Gallery.
Jan.	12	Sat.		Dental Aptitude Test.
Jan.	13-	Sun.-		Architecture exhibit, John Kehoe (sculpture)
Feb.	1	Fri.		Lee Hall Gallery.

CALENDAR OF CAMPUS EVENTS Continued

Jan.	14	Mon.	7:00 p.m.	Spanish film - Daniel Hall Auditorium.
Jan.	15	Tues.	7:00 p.m.	Congressman Gerald Ford, presented by Speakers Bureau - Tillman Hall Auditorium.
Jan.	17	Thurs.	3:30 p.m.	Malcolm B. Parsons, Professor, Florida State University, "Elitists' Perceptions of Presidential Performance," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Jan.	19	Sat.		Graduate Record Examination.
Jan.	19	Sat.		Graduate School Foreign Language Test.
Jan.	20	Sun.	8:00 p.m.	"Un Chien Andalou" and "Cabinet of Dr. Caligari," Student Union Fine Arts Films - Holtzendorff YMCA.
Jan.	21	Mon.	7:00 p.m.	French film - Daniel Hall Auditorium.
Jan.	23	Wed.		Varsity basketball - Furman at Clemson.
Jan.	24	Thurs.	8:00 p.m.	Dallas Symphony Orchestra with duo-pianists Whittemore and Lowe, Clemson University Concert Series - Littlejohn Coliseum.
Jan.	26	Sat.		Varsity basketball, Virginia at Clemson.
Jan.	26	Sat.		Admission test, graduate study in business.
Jan.	28	Mon.	8:00 p.m.	"Comedy of Errors," presented by the National Players - Tillman Hall Auditorium.
Jan.	29	Tues.		French play.
Jan.	30	Wed.		Varsity basketball - The Citadel at Clemson.
Jan.	31	Thurs.	3:30 p.m.	Robert Peabody, Professor, Johns Hopkins University, "Congress and the Making of Presidential Candidates," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Feb.	5	Tues.	7:00 p.m.	David Brinkley, presented by Speakers Bureau - Tillman Hall Auditorium.
Feb.	5	Tues.		German play.
Feb.	6- Feb. 7	Wed.- Thurs.		Short course in construction contract management.
Feb.	9	Sat.	1:00- 6:00 p.m.	CU Woman's Club - festival of arts, hobbies, and handcrafts - Clemson House.

CALENDAR OF CAMPUS EVENTS Continued

Feb.	9	Sat.		Architectural School Aptitude Test.
Feb.	10	Sun.	8:00 p.m.	"Illicit Interlude," Student Union Fine Arts Film - Holtzendorff YMCA.
Feb.	11	Mon.	7:00 p.m.	German film - Daniel Hall Auditorium.
Feb.	13	Wed.		Varsity basketball - Wake Forest at Clemson.
Feb.	14	Thurs.	3:30 p.m.	Marian D. Irish, Senior Fellow, Woodrow Wilson International Center for Scholars, "The President's Foreign Policy Machine," Liberal Arts Lecture Series - Daniel Hall Auditorium.
Feb.	16	Sat.		Varsity basketball - Maryland at Clemson.
Feb.	18	Mon.	8:00 p.m.	"America Singing," with the Paul Hill Chorale and Orchestra, Clemson University Concert Series - Littlejohn Coliseum.
Feb.- Apr.	19- 4	Tues.- Thurs.		P.E. refresher course.
Feb. Feb.	20- 22	Wed.- Fri.		Fourth Annual SC Highway Department Conference.
Feb.	23	Sat.		Varsity basketball - N.C. State at Clemson.
Feb.	23	Sat.		Graduate Record Examination.
Feb.	25	Mon.	7:30 p.m.	Trustees Medal finals - Daniel Hall Auditorium.
Feb.	26	Tues.	7:00 p.m.	Jeane Dixon, presented by Speakers Bureau - Tillman Hall Auditorium.
Feb. Feb.	26- 27	Tues.- Wed.		Short course on Housing Inspection.
Feb.	27	Wed.		Varsity basketball - Duke at Clemson.
Feb.	28	Thurs.	3:30 p.m.	Dorothy James, Professor, (Lehman College), City Univ. of New York, "The Institutionalization of the Presidency," Liberal Arts Lecture Series - Daniel Hall Auditorium.
March April	1- 1	Fri.- Mon.		Architecture exhibit, SCASA student exhibition.
March March	4- 8	Mon.- Fri.		Video tape skit contest (Department of Languages).
March	7	Thurs.	3:45 p.m.	CU Woman's Club - Clemson House.



CALENDAR OF CAMPUS EVENTS Continued

March	7	Thurs.	8:00 p.m.	Hurok Operatic Quartet, with Joann Yockey, Joann Grillo, Giuseppe Campora and Robert Goodloe - Clemson University Concert Series - Tillman Hall Auditorium.
March	9	Sat.		State-wide Tri-Service JROTC Drill Meet.
March	10	Sun.	8:00 p.m.	"The Magician," Student Union Fine Arts Film, Holtzendorff YMCA.
March	11-	Mon.-		FDA/NCA Low-Acid Food Supervisors School -
March	15	Fri.		P&AS Auditorium.
March	14	Thurs.	3:30 p.m.	Richard Nathan, Senior Fellow, Brookings Institution, "The President and the Bureaucracy in Domestic Affairs," Liberal Arts Lecture Series - Daniel Hall Auditorium.
March	15	Fri.		Baseball - Maryland at Clemson.
March	15	Fri.		Spring holidays begin after last class.
March	19	Tues.	7:00 p.m.	Debate: James J. Kilpatrick vs Karl Hess, presented by Speakers Bureau - Tillman Hall.
March	25	Mon.		Classes resume.
March	25	Mon.	7:30 p.m.	Visiting debators from Wellington, N.Z. - Daniel Hall Auditorium.
March	26	Tues.		Continuing Education classes.
March	27	Wed.		IEEE conference.
March	30	Sat.		Baseball - North Carolina at Clemson.
March	31	Sun.		Baseball - Duke at Clemson.
April	1	Mon.	7:00 p.m.	German film - Daniel Hall Auditorium.
April	2	Tues.		Continuing Education classes.
April	2-	Tues.-		State Supervisors and Teacher Educators in
April	5	Fri.		Agricultural Education Spring Planning and Evaluation Conference - 100 Tillman Hall.
April	2	Tues.		Baseball - Georgia at Clemson.
April	4	Thurs.	12:30 p.m.	CU Woman's Club luncheon - Clemson House.
April	4	Thurs.	3:30 p.m.	Avery Leiserson, Professor, Vanderbilt Univ., "Social Unrest and the Presidency," Liberal Arts Lecture Series - Daniel Hall Auditorium.

CALENDAR OF CAMPUS EVENTS Continued

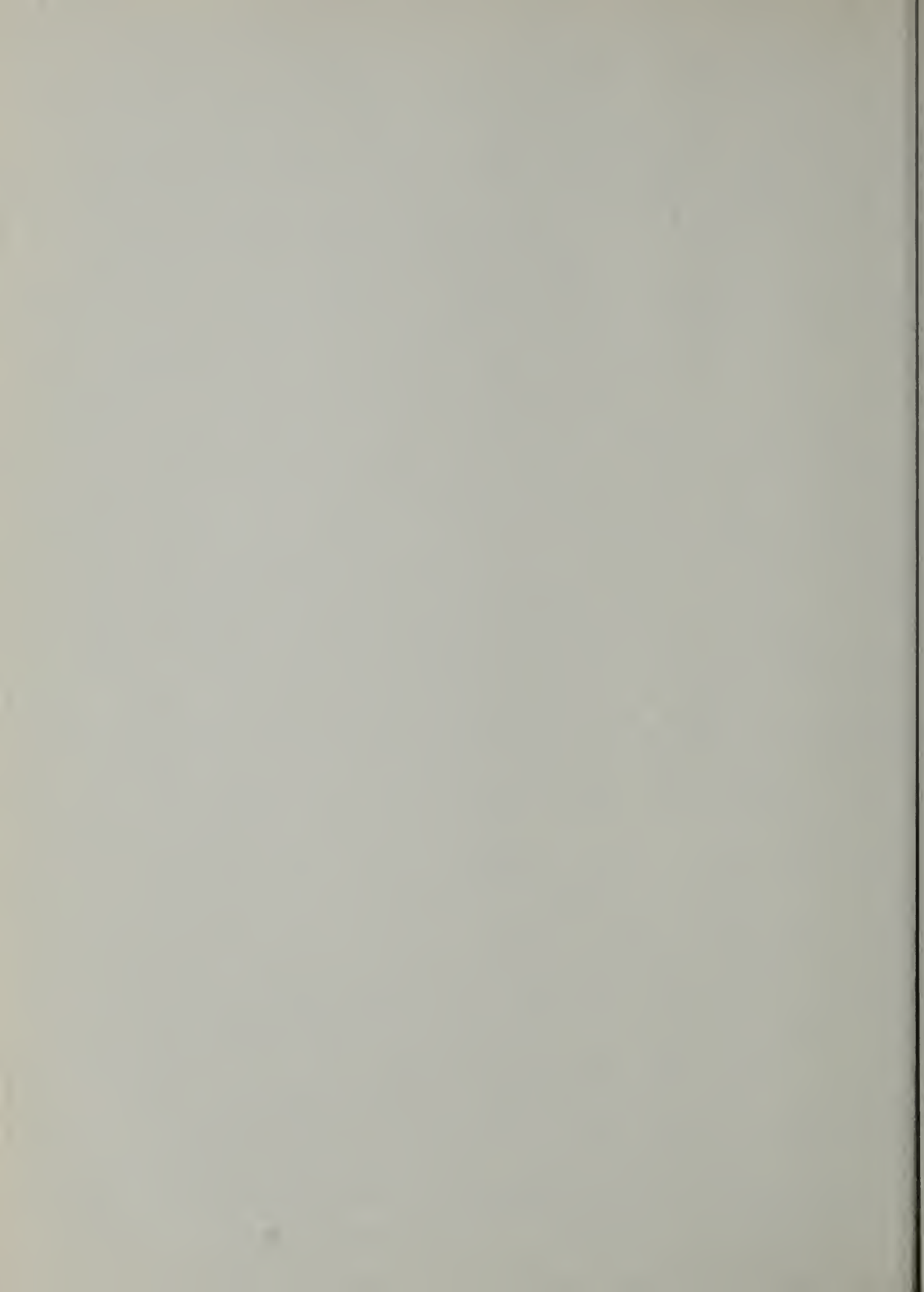
April	5- Fri.-		Dionysia Contest.
April	6 Sat.		
April	5 Fri.		Classes suspended, 12 noon.
April	5 Fri.	7:00 p.m.	Military banquet - Harcombe Dining Hall.
April	5 Fri.	9:00 p.m.	Military Ball - National Guard Armory.
April	6 Sat.		Future Farmers of America State Livestock Judging Contest.
April	6 Sat.		Future Farmers of America State Agricultural Mechanics Contest.
April	9 Tues.	8:00 p.m.	Clemson University Concert Band - Tillman Hall Auditorium.
April	9 Tues.		Continuing Education classes.
April	9 Tues.		Baseball - Georgia at Clemson.
April	10 Wed.		Honors and Awards Day, classes suspended 12 noon.
April	15 Mon.	7:00 p.m.	Spanish film - Daniel Hall Auditorium.
April	16 Tues.		Continuing Education classes.
April	19 Fri.		Baseball - Virginia at Clemson.
April	19- Fri.-		Southeastern Intercollegiate Livestock Evaluation and Selection Contests.
April	20 Sat.		
April	19 Fri.		Baseball - Virginia at Clemson.
April	20 Sat.		Dental Aptitude Test.
April	20- Sat.-		Sixth annual International Biomaterials Symposium.
April	24 Wed.		
April	20 Sat.		Baseball - Wake Forest at Clemson.
April	21 Sun.		Baseball - N.C. State at Clemson.
April	21 Sun.		"Rashomon," Student Union Fine Arts Film - Holtzendorff YMCA.
April	22 Mon.		Baseball - conference make-up date.
April	23 Tues.		Continuing Education classes.

CALENDAR OF CAMPUS EVENTS Continued

April	23	Tues.	Baseball - conference make-up date.
April	24	Wed.	Baseball - conference make-up date.
April	25	Thurs. 8:00 p.m.	Clemson University Concert Bank "Pops" Concert - Tillman Hall Auditorium.
April	25	Thurs.	Baseball - first round ACC tournament.
April	26	Thurs.	Baseball - ACC double elimination tournament.
April	27	Fri.	Graduate Record Examination.
April	27	Fri.	Graduate School Foreign Language Test.
April	27- 28	Fri.- Sat.	Baseball - ACC double elimination tournament.
April	29	Mon.	Exams begin.
April	30	Tues.	Continuing Education classes.
May	1	Wed.	Architectural exhibit - thesis show - Lee Hall Gallery.
May	1- 31	Wed.- Fri.	Architecture exhibit - Mercer (Ga.) faculty show - Lee Hall Gallery.
May	10	Fri.	Spring co-op employment ends, schedule B.
May	10	Fri.	Commencement.
May	10	Fri.	Joint Army and Air Force commissioning.
May	13	Mon.	Summer co-op employment begins, Schedule A.
May	21	Tues.	Classes begin, first session summer school.
May May	28- 31	Tues.- Fri.	Water & Wastewater Treatment Plant Operations School.
June June	2- 8	Sun.- Sat.	Boys Tiger Basketball Camp.
June- June	3- 7	Mon.- Fri.	Interactive Computing for high school students.
June June	4- 7	Tues.- Fri.	Future Farmers of America state convention - Daniel Hall Auditorium.

CALENDAR OF CAMPUS EVENTS Continued

June	6	Thurs.	Alumni President's reception for national officers of Association - Alumni Center.
June	6-	Thurs.-	Alumni Reunion Weekend.
June	9	Sun.	
June	7	Fri.	Director's meeting, Clemson University Foundation.
June	7	Fri.	Meeting of Alumni National Council.
June	9-	Sun.-	Boys Tiger Basketball Camp.
June	15	Sat.	
June	10-	Mon.-	Interactive Computing for high school students.
June	14	Fri.	
June	15	Sat.	Graduate Record Examination.
June	15	Sat.	Graduate School Foreign Language Test.
June	16-	Sun.-	Boys Tiger Basketball Camp.
June	22	Sat.	
June	17-	Mon.-	Interactive Computing for high school students.
June	21	Fri.	
June	23-	Sun.-	Boys Tiger Basketball Camp.
June	29	Sat.	
June	24-	Mon.-	Interactive Computing for high school students.
June	28	Fri.	
June	26-	Wed.-	Exams.
June	27	Thurs.	
July	1	Mon.	Orientation, new students.
July	2	Tues.	Registration, 2nd session summer school.
July	3	Wed.	Classes begin.
July	14-	Sun.-	Girls Tiger Basketball Camp.
July	26	Fri.	
Aug.	10	Sat.	Graduation.







### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

SEP 3 1973

CLEMSON UNIVERSITY LIBRARY  
Vol. 13 No. 2 SOUTH CAROLINA ROOM

September 1, 1973

## "The Future of the American Presidency" Will Be Presented by College of Liberal Arts

"The Future of the American Presidency" -- perhaps the hottest topic of news media, political circles and coffee break debates in this country this year -- will be the subject of a 12-part lecture series sponsored by Clemson University's College of Liberal Arts during the next nine months.

The lecture series will present the most extensive formal discussion on the American Presidency in recent years and certainly the first major such program since Watergate and its aftermath, according to College of Liberal Arts officials.

This in depth appraisal of the Presidency will bring to the campus a 1973 Pulitzer Prize winner, two Congressional leaders, several former top officials of the Federal Executive Branch, the president of the American Political Science Association, three fellows at distinguished research institutions, professors at seven universities, and authors of leading books and articles on the Presidency.

Pulitzer Prize winning journalist David Broder of The Washington Post will begin the series Sept. 13 with the topic "The Press and the Presidency."

Conceived before Watergate occurred -- the series was planned more than a year ago -- it should provide an even more timely examination of the Presidency in light of ongoing Congressional and judicial investigations.

Open to the public, it will offer the opportunity to hear the views of prominent scholars, news media representatives and political officials, and give college and high school students the benefit of some high-powered expertise in their studies.

Prof. Charles W. Dunn, head of the political science department and chairman of the lecture series committee which began the search for lecturers a year ago, announced that all 12 lectures will be held at 3:30 p.m. in Daniel Hall Auditorium.

"Perhaps at no other time in all of American history, including our nation's founding and the Civil War, has the role of the American Presidency been so seriously discussed," Dunn said.

"Because the decisions and policies of this office affect the whole world, people from all walks of life and in all parts of the world eagerly await an answer to the question: What is the future of this, the world's most powerful governmental institution?" he said.

Two Congressional leaders will present divergent viewpoints Sept. 27 and Oct. 11. Rep. John B. Anderson (R-Ill.), the first speaker, has as his topic "A Republican Looks at the Presidency," while Rep. Morris K. Udall (D-Ariz.) will follow with "A Democrat Looks at the Presidency."

On Oct. 15 Thomas E. Cronin, visiting professor at the Center for the Study of Democratic Institutions, will cover "Beyond the Textbook Presidency," followed by Prof. James D. Barber, head of Duke University's political science department, who will speak Oct. 25 on "Predicting Presidential Character."

Norman A. Graebner, renowned Edward R. Stettinius Professor at the University of Virginia will lecture Nov. 15 on "Presidential Power and International Relations."

On Jan. 17 Malcolm B. Parsons, professor of government at Florida State University, will discuss "Elitists' Perceptions of Presidential Performance." Robert Peabody, professor of political science at John

Hopkins University, will speak on Congress and the Making of Presidential Candidates" on Jan. 31.

Marian D. Irish, Senior Fellow at the Woodrow Wilson International Center for Scholars, will discuss "The President's Foreign Policy Machine" on Feb. 14, followed by Dorothy James, associate professor political science at Lehman College (City University of New York), who will cover "The Institutionalization of the Presidency" on Feb. 28.

Richard Nathan, Senior Fellow at Brookings Institution, will be here March 14 to speak on "The President and the Bureaucracy in Domestic Affairs." Avery Leiserson, professor of political science at Vanderbilt University and president of the American Political Science Association, will discuss "Social Unrest and the Presidency" April 4.

#### **Record Student Body Registers for 81st Session**

The largest student body in Clemson University's history began classes Aug. 24 for the institution's 81st academic session.

Clemson's total enrollment will reach a record 9,850 students, including the largest freshman class ever, for the fall semester of the 1973-74 year.

The total enrollment figure comprises about 9,150 undergraduate and graduate students on the main campus, and about 700 enrolled in various off-campus programs and institutes in the state. It is an increase of about seven per cent over the comparable figure a year ago.

Complete enrollment data will be published in the Newsletter when available.

#### **Revised Equal Employment Opportunity Policy Announced**

A revised Equal Employment Opportunity Policy has been issued by President Robert C. Edwards as a part of the University's affirmative action program. The complete policy statement follows:


#### **UNIVERSITY EQUAL EMPLOYMENT OPPORTUNITY POLICY**

I hereby reaffirm the previously stated policy of Clemson University that equal employment opportunity shall be provided, promoted, and insured for all qualified persons. The Civil Rights Act of 1964 (Public Law 88-352), the Education Amendments of 1972 (Public Law 92-318), and Executive Order 11246 prohibit discrimination in employment or discrimination under any program or activity in organizations receiving federal financial assistance. The South Carolina Human Affairs Law (1972(57)2651) prohibits discrimination in any State agency or department or its local subdivisions.

Affirmative action, therefore, shall be taken to recruit, hire, train, and promote persons in all employment categories without regard to race, color, religion, national origin, sex, or age, except where sex or age is a bona fide occupational qualification or age limitations are prescribed by law. Recognizing that differences exist in personnel policies, actions and benefits applicable, on the one hand, to faculty and, on the other hand, to staff, the implementation of policies, actions and benefits relevant to each shall be applied equally and without discrimination. Existing procedures shall be refined and expanded to insure that a continuing viable affirmative action program exists.

This policy shall be posted in places conspicuous to all members of the faculty, staff, and student body; it shall be communicated to all applicants for employment; and it shall be given such external dissemination as is necessary to inform and secure the cooperation of individuals and organizations constituting sources of employment referrals to the University.

The Administrative Assistant to the President is hereby designated the Affirmative Action Officer for the University.

  
Robert C. Edwards  
President



## Senn Named Fellow By Society for Horticultural Science

Prof. T. L. Senn of Clemson University has received international recognition for his contributions to the field of horticulture.

Prof. Senn was named a Fellow by the American Society for Horticultural Science Aug. 22 during the Society's 70th annual meeting at Raleigh, N.C. The Society's members include scientists, educators, and other professional horticulturists in the U.S. and in 74 foreign countries.

A native of Newberry, S.C., and a Clemson graduate, Senn has held various teaching, research, and extension positions during his 25 years on the Clemson faculty. He has served as head of the Horticulture Department since 1960.

Senn is known for his research into the physiology of horticultural crops as influenced by growing media containing humic acid, seaweed derivatives, and particularly agricultural and industrial by-products.

His outstanding teaching ability was cited in 1968 when he received the L. M. Ware Award for Distinguished Teaching.

He is the co-author of a textbook that is currently printed in six languages.

## "Godspell" and "Mark Twain on Stage" Head 1973-74 CU Concert Series

Some of the world's finest musical groups and performing artists, including the Broadway musical "Godspell" and "Mark Twain on Stage," will be presented during the 1973-74 Clemson University Concert Series.

The concert series is presented by the university's Fine Arts Series Committee. All programs will be held at 8 p.m. with five of the performances scheduled in Littlejohn Coliseum.

"Mark Twain on Stage," John Chappell's portrayal inspired by Hal Holbrook's famed "Mark Twain Tonight," opens the season Sept. 6. Chappell is the only actor authorized by Holbrook to do his interpretation of the American humorist.

Featured Oct. 17 will be the acclaimed stage production "Godspell," the musical based on the Gospel According to St. Matthew performed by a professional touring company direct from Broadway.

On Oct. 22 the Belgrade Chamber Orchestra, conducted by Antonio Janigro, will perform. Sixteen of Yugoslavia's greatest string players will present the music of Mozart, Tchaikovsky, Handel and Hindemith.

The Dallas Symphony orchestra will be the attraction Jan. 24. Donald Johanos will conduct, and duo-pianists Whittemore and Lowe will be featured.

A patriotic note will be added to the season Feb. 18 as the newly organized Paul Hill Chorale and Orchestra presents "America Singing," a bicentennial survey of music from our country's first two centuries.

Concluding the season, the Hurok Operatic Quartet will perform March 7. Four of the world's leading young opera stars will present popular arias, duets, trios, and quartets. Featured are soprano Joann Yockey, mezzo-soprano Joann Grillo, tenor Giuseppe Campora, and baritone Robert Goodloe.

General admission season tickets for adults are \$10 each and can be obtained by writing Clemson Concert Series, Box 2325 University Station, Clemson, S.C. 29631. Available at \$5 each are season tickets for primary and secondary school students, college students not enrolled at Clemson and Clemson student wives.

Clemson students are admitted to concerts upon presentation of student activity cards. Single admission tickets for adults (over age 16) are \$3, and children's tickets (age 16 and under) are \$1 each. Student group rates (minimum of 10) are also available.

## Counseling Center Announces CLEP Policy

Clemson University has authorized appropriate departments to accept credit on subject examinations of the College-Level Examination Program.



Credit is awarded by examination using the criteria established by each department which approves academic credit that can be counted toward undergraduate degree requirements. The following departments have established criteria for credit: English, Psychology, Economics, and Chemistry.

Credit is only awarded to those students whose scores on the subject examination surpasses the minimum cutoff score established by the department and satisfactory completion of the essay portion if required. Partial credit is not awarded.

Students who have failed a course recently (within a year of testing) in a particular subject will not be awarded credit in that subject through a subject exam of CLEP. Subject examinations may not be repeated within a year from the date of the original testing.

Further information can be obtained from the University Counseling Center.

#### **Fort Hill Shrimp Feast Scheduled for September 5**

The annual Fort Hill Clemson Club lakeside shrimp feast for students, alumni, IPTAY and friends will be held Wednesday, September 5 at 6:00 p.m. Martin's Landing will again be the site for the informal program that will include appearance and preview statements from the new Tiger Football Ringmaster "Red" Parker and Head Basketball Coach Tate Locke.

The date precedes by three days the 1973 football opener with The Citadel here at Clemson.

Advance tickets are now on sale at the Alumni Center and Fike Field House. Ticket price is \$5. Contingency arrangements have been made in case of rain. Tickets should be purchased in advance since there will be a limited number available.

#### **Sandoz Grant Will Launch Accelerated Textile Graduate Program**

An experimental program whose aim is to make more highly-qualified technically trained people available to the textile industry in a shorter period of time will be launched by Clemson University this month.

The Sandoz Foundation of the Swiss-based Sandoz Colors and Chemicals firm will grant the university's textile department a total of \$15,000 over the next two years to conduct the project in graduate textile education.

Dr. Robert H. Barker, J.E. Sirrine Associate Professor of Textile Chemistry at Clemson, developed the idea for the accelerated program of study. He believes it offers definite advantages not only to the textile industry, but for the student and university alike.

Barker said the time required for a student to complete requirements for the master's or doctoral degree is considerably shortened because the program allows the student to begin research for an advanced degree while still in undergraduate school.

"This will mean the student will save six months to a year as compared to normal graduate study progress," said Barker. "Not only will this offer a real advantage to the student, but it will also mean that a better supply of highly-qualified, technically trained people will be available to the industry one year sooner," he added.

"There is rather a critical shortage of trained people in many textile-oriented fields such as textile chemistry and textile science. This plan should graduate more qualified personnel in less time, but with no sacrifice whatever in the quality of education received," said Barker.

FACULTY PROMOTIONS ANNOUNCED FOR 1973-74

Fifty-two members of the teaching and research faculties were promoted in rank for the year 1973-74. Of these, sixteen associate professors became professors; twenty-five assistant professors became associate professors, and eleven instructors became assistant professors.

COLLEGE OF AGRICULTURAL SCIENCES:

Promoted to Professor:

Lawrence H. Harvey  
Fred H. Smith  
George E. Stemberge  
Charles A. Thomas, Jr.

Promoted to Associate Professor:

Robert E. Currin III  
John P. Fulmer  
James R. Holman  
James W. Kelly  
John F. Wise

Promoted to Assistant Professor:

Ralph T. Brown, Jr.  
Wilton P. Cook  
Ibrahim M. Ibrahim  
Emory V. Jones

COLLEGE OF ARCHITECTURE:

Promoted to Professor:

Jack L. Clark

Promoted to Assistant Professor

Thomas G. Turner

COLLEGE OF EDUCATION:

Promoted to Professor:

Gordon W. Gray

Promoted to Associate Professor:

Sam L. Buckner  
Paul C. Caley  
Thomas H. Parry  
William E. West

FACULTY PROMOTIONS ANNOUNCED FOR 1973-74 (Continued)

COLLEGE OF ENGINEERING:

Promoted to Professor:

Atwell R. Abernathy  
Walter E. Castro

COLLEGE OF INDUSTRIAL MANAGEMENT AND TEXTILE SCIENCE:

Promoted to Professor:

Billy R. Skelton

Promoted to Associate Professor:

Carl L. Dyer  
James A. Turner  
Edward A. Vaughn  
Thomas B. Yandle, Jr.

COLLEGE OF LIBERAL ARTS:

Promoted to Professor:

John H. Butler

Promoted to Associate Professor:

Harold E. Albert  
Joseph L. Arbena  
Edwin M. Coulter  
Thomas E. Douglass  
Howard B. Hannah  
Rob R. McGregor, Jr.

Promoted to Assistant Professor:

Helen M. Fleishman  
Horace W. Fleming  
George W. Koon  
Thomas M. Verich

COLLEGE OF PHYSICAL, MATHEMATICAL, AND BIOLOGICAL SCIENCES:

Promoted to Professor:

Farrell B. Brown  
Philip B. Burt  
William R. Hare, Jr.  
Stanley M. Lukawecki  
Nicasio P. Marullo  
William H. Ruckle

FACULTY PROMOTIONS ANNOUNCED FOR 1973-74 (Continued)

COLLEGE OF PHYSICAL, MATHEMATICAL, AND BIOLOGICAL SCIENCES (Continued)

Promoted to Associate Professor:

Muriel B. Bishop  
Sidney A. Gauthreaux, Jr.  
Ruth L. Hays  
Knox S. Landers  
Joseph R. Manson  
Gary L. Powell

Promoted to Assistant Professor:

Jeuel G. LaTorre  
Russell S. Schouest

MINUTES OF THE MEETING OF THE EDUCATIONAL COUNCIL, AUGUST 6, 1973

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Joseph B. McDevitt, Walter T. Cox, Luther P. Anderson, John D. Fulton, Claud B. Green, Rebecca Hair, Morris A. King, Geraldine Labecki, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, M. A. Owings, A. E. Schwartz, W. D. Trevillian, Lyle C. Wilcox, S. M. Willis and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of June 11, 1973 were approved as submitted

2. Curriculum Changes

Statement and Recommendation: The Dean of the University recommends the following addition to the curriculum, effective when designated on the appropriate request for approval form as follows:

I. COLLEGE OF PHYSICAL, MATHEMATICAL AND  
BIOLOGICAL SCIENCES

(A) New Graduate Course

Math 865	Calculus of Finite Differences	3 cr. (3 and 0)
	(Replaces Math 506)	

3. Campus Parking

Statement: The policy of assigning reserved parking spaces should be reviewed and revised as necessary to ensure that existing inconsistencies in parking assignments for members of the Administration, Faculty, and Staff are eliminated.

Recommendation: That appropriate individuals develop parking plans which will eliminate any present discrimination in parking for all Administration, Faculty and Staff.

*E. N. Tyndall*

E. N. Tyndall  
Secretary



GRADUATE COUNCIL MINUTES, JULY 17, 1973

The meeting of the Graduate Council was called to order by Dean Schwartz. Those present were: Dr. Brown, Dr. Howard (alternate for Dr. Gahan), Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, and Mr. Brusse. Dean Schwartz welcomed the new Council members.

The minutes of the May 9, 1973 meeting were approved as distributed.

The need for a mechanism to enroll students who have completed all course work in order to complete their comprehensive examinations was discussed. Dean Schwartz explained that a continuous enrollment policy had been in effect previously, but was discontinued for several reasons. A special course provided by the Graduate School, GS 799, with variable credit was requested. The Council made a motion that the Graduate School be authorized to take proper steps to implement such a course. The motion was seconded and approved.

Dr. Brown presented a progress report regarding the implementation of the revised Thesis Manual.

A motion was made, seconded and approved that the following courses not be approved because of lack of sufficient justification:

- AAH 617 - Studies in the Art and Architecture of the Ancient World I (Repl. Arch 517)
- AAH 618 - Studies in the Art and Architecture of the Ancient World II (Repl. Arch 518)
- AAH 619 - Studies in the Art and Architecture of the Early Middle Ages I (Repl. Arch 519)
- AAH 620 - Studies in the Art and Architecture of the Early Middle Ages II (Repl. Arch 520)
- AAH 621 - Studies in the Art and Architecture of the Late Middle Ages I (Repl. Arch 521)
- AAH 622 - Studies in the Art and Architecture of the Late Middle Ages II (Repl. Arch 522)
- AAH 623 - Studies in the Art and Architecture of the Renaissance I (Repl. Arch 523)
- AAH 624 - Studies in the Art and Architecture of the Renaissance II (Repl. Arch 524)
- AAH 625 - Studies in the Art and Architecture of the Technological Revolution I (Repl. Arch 525)
- AAH 626 - Studies in the Art and Architecture of the Technological Revolution II (Repl. Arch 526)
- AAH 627 - Studies in the Development of Architectural Technology I (Repl. Arch 527)
- AAH 628 - Studies in the Development of Architectural Technology II (Repl. Arch 528)
- AAH 629 - Studies in the Art and Architecture of India and the Far East I (Repl. Arch 529)
- AAH 630 - Studies in the Art and Architecture of India and the Far East II (Repl. Arch 530).

GRADUATE COUNCIL MINUTES, JULY 17, 1973 (Continued)

A request by the College of Architecture for approval of a Graduate Professional Overseas Program was discussed. A motion was made to approve, seconded, and passed.

A proposed Graduate Student Association was briefly discussed and the Council requested Mr. Brusse, student representative, to contact and meet with this group.

A motion was made, seconded, and passed to adjourn.

FACULTY RESEARCH COMMITTEE GRANT APPLICATIONS

Proposals for faculty research committee grants should be in the Office of University Research (107 Martin Hall) not later than November 1, 1973. Application forms may be secured in the Office of University Research. Only proposals using the Faculty Research Committee application form will be considered by the committee.

The committee makes awards to new faculty members initiating research, to faculty members initiating research in a new area, and in areas where other sources of support are inadequate or non-existent.

COOPERATIVE EDUCATION

The annual meeting of the Cooperative Education Advisory Council was held at Clemson University August 2, 1973. The council reviewed the operating procedures of the program and made recommendations for its improvement. The following members compose the 1973 Cooperative Education Advisory council:

J. C. Hester (Assoc Prof and Hd, ME)  
C. R. Freeze (Prof, Elem and Sec Educ)  
Steven B. Haigh, Adm Mgmt Student  
Frank E. Gramling, EE Student  
J. W. Morris, E. I. du Pont de Nemours and Company  
W. L. Pherigo, C&S National Bank of South Carolina  
Sam M. Willis, Dean of Univ Ext ( Ex Officio)  
R. A. Banister, Director, Cooperative Education

OFFICE OF UNDERGRADUATE STUDIES

Dean Claud B. Green was elected chairman of the Executive Committee of the South Atlantic District of Phi Beta Kappa at the recent triennial meeting held at Vanderbilt University on August 7-10, 1973. Others selected to serve with him for the triennium, 1973-1976 are Vice-Chairman, Robert Epes Jones of Randolph-Macon College; Secretary-Treasurer, Jo Allen Bradham of Agnes Scott College; and Members of the Executive Committee, Lena Beauregard of Howard University and Gordon M. Ramm of the University of Maryland.

CHEMISTRY

Recent Publications: S. Bright (former Grad Stu), J. Platano (former Grad Stu) and J. Jacobus (Assoc Prof), "Amphetamine. Specific Labelling and Solution Conformation," J. Org. Chem., 38, 2554 (1973).

J. W. Huffman (Prof) and J. J. Gibbs (Grad Stu), "Reductive Backbone Rearrangements in Resin Acids," J. Org. Chem., 38, 2732 (1973).

COLLEGE OF EDUCATION

Harold F. Landrith (Dean) conducted a seminar on proposed changes in teacher certification in South Carolina for the county presidents of the Association of Classroom Teachers in Columbia, Aug. 2.

COLLEGE OF LIBERAL ARTS

A symposium, "Two Decades of Change: The South since the Supreme Court Decision," will be held in Daniel Auditorium on Sept. 28-29. The symposium is sponsored by the College of Liberal Arts under a grant from the South Carolina Committee on the Humanities of funds from the National Endowment for the Humanities. Programs listing speakers and panels may be obtained for the local coordinators, Richard J. Calhoun (Alumni Prof of English) and E. M. Lander, Jr. (Alumni Prof of History).

PHYSICS

M. J. Skove (Alumni Prof) had an article published in the Physical Review in July entitled, "High-Order Elastic Constants of Copper and Nickel Whiskers."

## ENVIRONMENTAL SYSTEMS ENGINEERING

The Environmental Systems Engineering Department and the Water and Pollution Control Association of South Carolina will sponsor a short school at Sumter Technical Education Center for Water and Wastewater Treatment Plant Operators, Sept. 11-14. The school will provide nine parallel concentrated review courses -- one for each level, A-B-C-D, in both water and wastewater plants and a D groundwater course. Information can be obtained through Dr. John Austin (Prof and Hd), Miss Patsy Phillips, Rhodes Research Center, 656-3276, or the Office of Continuing Engineering Education, 656-3308.

T. M. Keinath (Assoc Prof) has received approval by the Department of the Army of a research proposal entitled, "Modeling and Simulation of Heterogeneous Sorption in Continous Contactors for Wastewater Decontamination: Influence of Reversibility and Chromotographic Effects on System Design and Operation." The funding level approved was \$41,583 for a one-year period beginning on July 1. Drs. J. C. Mullins and S. S. Melsheimer of the Dept. of Chemical Engineering are investigators on this interdisciplinary project.

L. G. Rich (Prof) and T. M. Keinath will present a paper entitled, "Ecosystem Simulation as a Method of Teaching Aquatic Chemistry" at a symposium on "Education in Chemistry of the Aqueous Environment" which is scheduled for the 166th National Meeting of the American Chemical Society which is to be held in Chicago, Aug. 26-31.

A. R. Abernathy (Prof) participated in a workshop on water quality surveillance in Knoxville, Tenn. on July 2-3. The workshop was sponsored by the Water Resources Research Institutes in Florida, Georgia, North Carolina, Tennessee, Virginia, and South Carolina and was concerned with regional efforts to improve water quality.

## HORTICULTURE

G. E. Stembridge (Prof) recently presented the following seminars to research groups in Australia during his sabbatical. "Uses of growth regulating chemicals in fruit production," a joint seminar for the Horticulture Division of the Commonwealth Scientific and Research Organization, and the Victoria Department of Agriculture Research Station at Mildura, Victoria. "Controlling Fruit Development with Growth Regulating Chemicals," presented at the Scoresby Horticultural Research Station, Ferntree Gully (Melbourne). "Uses of growth regulants to control peach maturity and facilitate mechanical harvest," presented at the Tatura Horticultural Research Station, Tatura, Victoria.



MICROBIOLOGY

Ann W. Baxter (Assoc Prof) has been appointed to membership on the newly organized Public Affairs Committee of the American Society for Microbiology. This Committee is charged with the responsibility of developing appropriate mechanisms for recognizing areas of public policy that affect or are affected by Microbiology, and of developing appropriate mechanisms of reaction and response.

PLANT PATHOLOGY AND PHYSIOLOGY

F. H. Smith (Prof) attended the American Peanut Research and Education Association meeting in Oklahoma City, July 15-18. While there, he also participated in the organization of a Southeastern Soybean Disease Workers Conference.

HISTORY

J. Y. LeBourgeois (Asst Prof) has published, "Swinburne and Simeon Solomon, Notes and Queries (March, 1973).

POULTRY SCIENCE

William T. Derieux (Vet II) presented a paper, "Immunologic Response of turkeys to an Avirulent Pasteurella multocida Vaccine in the Drinking Water: Field Trial," co-authored by B. W. Bierer (Prof) at the 110th annual meeting of the American Veterinary Medical Association in Philadelphia on July 18.

K. A. Holleman (Assoc Prof) presented "Response of Laying Hens to High Dietary Polychlorinated Biphenyls" co-authored by B. D. Barnett (Prof and Hd) at the 62nd annual meeting of the Poultry Science Association in Brookings, S.D. Aug. 6-10. Dr. Holleman also presented "Soft and Hard Cooking of Shell Eggs" and received the American Egg Board's Egg Science Award for excellence. The award included a plaque and \$100.

B. D. Barnett was General Program Chairman of the 62nd annual meeting of the Poultry Science Association and served on the Executive Committee of the association which met Aug. 4-8.



ADDITIONAL NEW FACULTY AND STAFF, 1973-74

College of Agricultural Sciences

Glenn, William K., Assistant Entomologist, Plant Pest Regulatory Service (Columbia); B.S., M.S., Clemson University; Single

College of Education

Ezzard, Ruth A., Assistant Professor of Education; B.S., Ed.D., University of Georgia; M.Ed., University of Louisville; Married, five children; 406E Gaines Street, Central

Keller, Don F., Assistant Professor of Education; B.S., M.A., Southeast Missouri State College; Ed.D., Indiana University; Married, two children

Neal, Jerry M., Assistant Professor of Education; B.S., Samford University; M.Div., Southern Baptist Seminary; M.S., Ed.D., Indiana University; Married, two children; Route 2, Stagecoach Drive, Anderson

Stanley, Virginia B., Instructor of Education; B.S., Winthrop College; M.Ed., Clemson University; Married, one child; 104 Carteret Court

College of Forest and Recreation Resources

Miller, Ansel E., Assistant Professor of Forestry; B.S., Mississippi State University; M.S., Clemson University; Ph.D., University of Georgia; Married

College of Liberal Arts

Anson, Edward M., Lecturer in History; B.A., Drake University; Married, one child

Dennis, John H., Jr., Part-time Lecturer in History; B.A., Northeast Louisiana State College; M.A., University of Georgia; Married, one child

Bailey, James O., Lemon Professor of English; B.A., M.A., Ph.D., University of North Carolina; Married, one child

Herlong, Henry K., Instructor in English; B.S., Clemson University; M.A., University of Tennessee; Married, three children

Mandel, Miriam B., Instructor in English; B.A., Happa College; M.A., Ohio State University; Married, two children; 224 N. Clemson Avenue

College of Nursing

White, Worthlyn A., Visiting Instructor, B.S.N., Medical University of South Carolina

College of Physical, Mathematical, and Biological Sciences

Yu, Dong Pil, Visiting Assistant Professor of Zoology; B.S., M.S., Tusan Fisheries College; Ph.D., University of Georgia; Married, two children

# Free Tutoring Offered by Sigma Tau Epsilon

Professors who teach freshman and sophomore level courses in the College of Physical, Mathematical and Biological Sciences and the College of Liberal Arts are asked to remind their students of FREE tutoring offered by Sigma Tau Epsilon Monday nights 6:30 to 9:30 in Daniel Hall.

## CALENDAR OF CAMPUS EVENTS

Sept. 1	Sat.	7:00 p.m.	Student Union Dance-Concert, "Y" Beach
Sept. 3	Mon.	9:05-11:15 a.m.	Agronomy Conference: "Production, Marketing and Use of Nitrogen Fertilizer," A-203 P&AS Bldg.
Sept. 3	Mon.	7:00 p.m.	Spanish Film, Daniel Auditorium
Sept. 4- Sept. 28	Tues.- Fri.		Architecture Exhibition, 60's Continuum (Photography) Lee Gallery
Sept. 5	Wed.	6:00 p.m.	Ft. Hill Clemson Club "Shrimp & Sip," Wilson's Landing (PPD to 6th if raining)
Sept. 6	Thurs.	3:45 p.m.	CU Woman's Club, Clemson House
Sept. 6	Thurs.	8:00 p.m.	"Mark Twain on Stage," Clemson University Concert Series, Littlejohn Coliseum
Sept. 8	Sat.	1:30 p.m.	Varsity Football: Citadel at Clemson
Sept. 9	Sun.	2:00 p.m.	Soccer: South Carolina at Clemson
Sept. 11	Tues.	7:00 p.m.	Bill Bradley, presented by Speakers Bureau, Tillman Auditorium
Sept. 11- Sept. 14	Tues.- Fri.		State Supervisors and Teacher Educators in Agricultural Education Fall Planning and Evaluation Conference, 100 Tillman Hall
Sept. 12	Wed.	12:00 noon	Ft. Hill QB Club Luncheon, Clemson House
Sept. 13	Thurs.	3:30 p.m.	David Broder, Columnist, Washington Post, "The Press and the Presidency," Liberal Arts Lecture Series, Daniel Auditorium
Sept. 17	Mon.	7:00 p.m.	French Film, Daniel Auditorium

### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 3

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM

September 15, 1973



**CLEMSON WELCOME** — Vice President for Academic Affairs Victor Hurst and President Robert C. Edwards welcome Dr. Howard Boozer, newly appointed Executive Director of the South Carolina Commission on Higher Education. Dr. Boozer was at Clemson Sept. 7 to be briefed on various University programs.

## Additional Parking Made Available for Commuter Students

Clemson University has made about 225 additional parking spaces available for commuter students. Three large parking areas are already assigned for their use.

Additional commuter parking spaces will be provided at three campus locations. Signs have been posted at each site.

A recently paved lot on "A" Street between Littlejohn Coliseum and the soccer field will accommodate about 100 cars. Another parking area between the soccer field and football stadium is being assigned for commuter parking, providing another 75 spaces.

The third area being designated for commuter parking is the road which leads into the construction area at the rear of Lee Hall (College of Architecture). Students can now park on both sides of this road which will accommodate about 50 cars.

Traffic and Parking Committee Chairman E.H. McCarter said that the enrollment of a larger number of commuter students than originally anticipated had created the demand for additional parking spaces.

The Committee also said that two additional lights are being installed along the north entrance road to the large resident student parking lot south of the high-rise residence halls.



.2 . September 15, 1973

CLEMSON UNIVERSITY  
CLEMSON, SOUTH CAROLINA 29631

OFFICE OF THE PRESIDENT

September 15, 1973

Dear Faculty and Staff Members:

Thank you very much for the patience and cooperation you have shown during the past few weeks as we have all been adjusting to changes on campus. In spite of a new traffic plan, new parking arrangements and construction in several areas, the opening of school has gone very smoothly. Certainly, the confusion has been minimal compared to what it might have been without the spirit of cooperation and patience shown by you, students and townspeople.

We don't have all the problems solved yet, but I believe we do have the kind of campus climate where cooperation and enthusiasm make it a lot easier to find good, workable solutions. I invite your participation in this process and hope you'll contribute your ideas often. I intend to keep you informed, as far in advance as possible, about actions affecting Clemson's future and the environment in which you teach and work.

I deeply appreciate your help in the past and ask for your continuing support and cooperation as Clemson moves forward.

Sincerely,



Robert C. Edwards  
President

RCE:bc



## Hook Appointed Director of Baruch Research Institute

Clemson University has announced the appointment of Dr. Donal D. Hook, 40-year-old native of Cleveland, Okla., as resident director of The Belle W. Baruch Research Institute.

Hook comes to the Baruch Institute from a position as associate professor of forestry at the University of Kentucky. In addition to his administrative duties, he will be professor of forestry development and coordinate the overall program of research in forest and wildlife sciences and will be in charge of forest management for the Hobcaw Forest.

Hook received his B.S. degree (1961) from Utah State University, M.S. degree (1962) from the University of Minnesota, and Ph.D. (1968) from the University of Georgia. He and his family will reside in Georgetown.

The Institute was established to implement the 1968 agreement between The Belle W. Baruch Foundation and Clemson. It conducts research and teaching programs in forestry, wildlife, and the care and propagation of flora and fauna of South Carolina.

The Institutes's scientific and educational programs, although statewide, are centered at Hobcaw Barony, a 17,500-acre plantation located on a peninsula known as Waccamaw Neck near Georgetown.

Bounded on one side by the Atlantic Ocean and on another by Winyah Bay, the barony contains a diversity of lands, including ocean beaches, unpolluted salt marshes, old rice fields, fresh water swamps, and upland forest sites. A rich variety of plant and animal species is found on the area, some inhabitants virtually undisturbed for several hundred years.



**SYMBOLIC BEGINNING**—While construction crews were already busy excavating and preparing the site for the University Union, student and administrative leaders turned a few symbolic shovelfuls of dirt in a loaded wheelbarrow at groundbreaking ceremonies Aug. 30. Left to right are: Stephen Csernak, student body vice president; John Pratt, student body president; Joyce Kelley, member of the University Union governing board, and President Robert C. Edwards. Completion of the \$2.6 million project is expected in mid-1975.

MINUTES OF THE MEETING OF THE FACULTY SENATE, JULY 10, 1973

President Fulton called the meeting to order at 4:20 p.m. He called attention to some errors in the minutes of the June 12 meeting: on page 1, first paragraph, "Prof. Carlton should be "Prof. Roberts," on page 2, third paragraph, "Prof. Baron should be "Prof. Bauld" and on page 6, third paragraph from the bottom should read "... Clemson's incoming freshmen of 1972 had the highest mean SAT scores of any state-supported institution in South Carolina." In reference to that matter, Pres. Fulton added that the same report shows that, among South Carolina four-year colleges and universities, Clemson University had the highest percentage of its 1972 incoming freshmen in the top 10%, the top 20%, the top 30%, the top 40%, and the top 50% of their high school classes. The June minutes were approved incorporating these corrections.

Pres. Fulton announced that the following alternate Senators were present: E. A. Vaughn for C. W. Roberts, L. E. Seamon for E. P. Arnold, and C. B. Russell for P. T. Holmes.

President's Report

Pres. Fulton stated that faculty members would be notified about their salaries for the 1973-74 year shortly, probably following the meeting of the State Budget and Control Board.

Pres. Fulton announced that there will soon be a repository of minutes of the Senate meetings in the South Carolina Room of the Cooper Library; the minutes will be the complete and corrected versions. The Newsletter will continue carrying a condensed version of the minutes (omitting resolutions not passed by the Senate).

Pres. Fulton suggested that an administrative member should not be included on the Senate's Ad Hoc Committee on Faculty Work Loads as stipulated in the Resolution at the June meeting (FS-73-6-7). Senator Skelton introduced a RESOLUTION TO CHANGE THE COMPOSITION OF THE WORK LOAD COMMITTEE (FS-73-7-1):

BE IT RESOLVED that there be four faculty members on the committee to study faculty work loads.

The Resolution passed unanimously.

Pres. Fulton announced the membership of the Advisory Committee for the Student Relations Committee, created at the June meeting by Resolution FS-73-6-5. The members are: Susan H. Brown, Industrial Management; Lewis T. Fitch, Electrical and Computer Engineering; Malcolm J. Skove, Physics; Averett S. Tombe, Zoology; and C. R. Dillon, Biology. Profs. Dillon, Fitch, and Tombe are also

MINUTES OF THE MEETING OF THE FACULTY SENATE, JULY 10, 1973 (Continued)

Faculty Senate members; as prescribed by the resolution, Prof. Dillon, chairman of the Senate's Welfare Committee, will act as chairman. Prof. Steirer, chairman of the Student Relations Committee, will serve as a consulting, non-voting member.

Pres. Fulton then referred to the Preliminary Report on Graduate Productivity Study prepared by the South Carolina Commission on Higher Education. This study has suggested criteria for elimination of graduate programs at state-supported schools in South Carolina; specifically, it lists magisterial programs which have not produced at least an average of two graduates per year for the past six years and doctoral programs which have not produced at least one per year for the same period. The study recommends that, after the various colleges and universities have confirmed the data, the Commission would "request reports of each institution as to whether or not these programs will be withdrawn; or if not on what basis their continuation is to be justified." Pres. Fulton has requested the Research Committee to investigate the matter of duplication of programs at the graduate level; the Admissions and Scholarship Committee will do the same for undergraduate programs. Pres. Fulton reported that President Edwards had assured the Educational Council that there will be an opportunity for faculty input into the matter.

Pres. Fulton also noted that, effective August 1, Mr. Howard R. Boozer will become the new Director of the Commission on Higher Education.

Regarding the 1972-1973 University Budget, Pres. Fulton again raised the question of whether or not the Senate's committee to study that budget should be reinstated. The data provided for the committee by President Edwards last year presented the most optimistic hopes for funds for the University for each year shown. Data provided the Faculty Senate more recently by Vice President Wilson shows the amounts funded as of June 30 each year. Thus there are substantial discrepancies in the two charts. Prof. Carpenter suggested that University officials should supplement the "wish money" data with data on funds actually expended. Prof. Bauld pointed out that politicians who might need the data on actual funding have access to it. Prof. West stated that he believes the Senate has made its point and that President Edwards' future budget summaries would reflect the University budget as of June 30 each year. No action was taken.

In reference to the construction of new parking facilities in front of Tillman and Godfrey Halls, Pres. Fulton pointed out that the Planning Council had approved the general proposal, but that the Landscape and Site Development Committee worked out the details. Whereas the former group has faculty representation, the latter has only one faculty member. Although Pres. Fulton had no criticism of this particular project, he argued that more faculty input ought to be provided in implementation of University master plans. Prof. Vaughn introduced a RESOLUTION ON FACULTY MEMBERSHIP ON THE LANDSCAPE AND SITE DEVELOPMENT COMMITTEE (FS-73-7-2):



MINUTES OF THE MEETING OF THE FACULTY SENATE, JULY 10, 1973 (Continued)

BE IT RESOLVED that the Landscape and Site Development Committee include an additional member from the faculty who has expertise in landscaping and site development, this member to be nominated by the President of the Faculty Senate.

The Resolution passed unanimously. In the discussion, it was pointed out that there are plans to provide additional parking spaces for personnel working at Sikes Hall; the question was raised as to whether or not these personnel are more important than faculty members, who often must walk farther to their offices. Prof. Adkins noted that, according to the Parking Master Plan, an effort will be made to permit faculty members to park within 5 minutes walking time to their working station. He further noted that not all faculty members arrive at 8:00 and leave at 5:00, since some have errands on campus during the day. He argued that such a distance would be inconvenient for them and urged that the matter be given consideration.

Prof. Grove introduced a RESOLUTION ON PUBLICATION OF PLANS BY THE PLANNING COUNCIL (FS-73-7-3):

BE IT RESOLVED that the Planning Council require that all development plans be published by the Landscape and Site Development Committee and that 30 days be given for public review and comment prior to implementation by the Executive Officers.

The Resolution passed unanimously.

Pres. Fulton said that regarding the matter of leave for 12-month faculty (see Senate Resolution FS-73-5-3) the administration of the University will request the Board of Trustees to permit the administration of the University to determine leave policies for its employees. Dean Hurst indicated to Pres. Fulton that this request does not necessarily imply administrative acceptance of the Resolution. General Rigsby has suggested to Pres. Fulton that the 1972 State law concerning annual leave for State employees may apply to University faculty.

In reference to the situation at Sumter, Pres. Fulton said that Clemson University is proceeding with the orderly transfer of the Clemson Sumter Center to the University of South Carolina. He was assured by Dean Hurst that tenured faculty members at Sumter will be able to remain with Clemson, if they prefer.

Finally, Pres. Fulton reported that the Resolution on the Honor System (FS-73-6-4) will be considered by the Student Senate this fall.

MINUTES OF THE MEETING OF THE FACULTY SENATE, JULY 10, 1973 (Continued)Committee Reports

For the Admissions and Scholarships Committee Prof. Fitch moved the adoption of a RESOLUTION ON AWARDING OF DEGREES AFTER MATRICULATION IN A PROFESSIONAL SCHOOL (FS-73-7-4):

WHEREAS the policy of Clemson University has been, since 1961, to award the baccalaureate degree only to those students who complete a prescribed course of study at Clemson University,

BE IT RESOLVED that all students attending Clemson University in good standing for three academic years in pre-medicine, pre-dental, pre-law, and pre-veterinary medicine curricula will be awarded the baccalaureate degree from Clemson University upon successful completion of the equivalent of one academic year in a professional program.

The extension of this policy to new pre-professional and professional programs will be reviewed upon request.

Expressing concern about the vagueness of the wording, Prof. Jacobus introduced an amendment to change the wording of the second paragraph to read: "... will be awarded the baccalaureate degree from Clemson University upon the attainment of the professional degree." The amendment failed; Prof. Jacobus requested to go on record as voting for the amendment.

The original Resolution passed.

Prof. Fitch then introduced a series of Resolutions: the RESOLUTION ON EXPLICIT STATEMENT OF ATTENDANCE POLICY (FS-73-7-5) would require each faculty member to provide students with a written statement of his attendance policy within the first week of class; the RESOLUTION OF EXPLICIT STATEMENT OF GRADING POLICY (FS-73-7-6) would similarly require each faculty member to inform students of his policy pertaining to final examinations and grades; and the RESOLUTION ON KEEPING OF RECORDS (FS-73-7-7) would require each faculty member "to keep all records of a student's performance in class, including grade books and class work not returned to the student, for a minimum of six months."

All three resolutions failed. Although there was general sentiment among the Senators that the policies prescribed by the Resolutions are desirable, there was considerable question over whether faculty members should be forced to follow such rules. Prof. Lebourgeois pointed out that, if passed, they would



MINUTES OF THE MEETING OF THE FACULTY SENATE, JULY 10, 1973 (Continued)

in effect be bringing about a managerial revolution from within. Prof. Russell questioned whether or not they were enforceable. Ms. Kelly noted that, in the new rules, class attendance is the student's, rather than the faculty member's responsibility. Prof. Fitch stated that the reason for submitting the resolutions was to help protect the faculty members in grievances brought before the Student Relations Committee. Prof. Baron replied that if a faculty member is not bright enough to do these things without being required to, he deserves what he gets. A Resolution that these rules be printed in a faculty information booklet was withdrawn.

There was no report from the Policy Committee.

For the Research Committee Prof. Bauld reported that a sub-committee had been set up to prepare a questionnaire for pertinent deans and department heads to determine if the University's Office of Research is doing a satisfactory job. Regarding the matter of indirect costs, he said that a letter will be sent out to other colleges to find out what basis they use for determining indirect costs; also the possibility of deflecting some funds received as indirect costs back to the individual departments will be considered.

For the Welfare Committee Prof. Dillon reported that Dean Hurst had indicated that many unusual salary differentials at the University have been relieved in the 1973-1974 budget. The Committee is going to set up a profile on the 17 companies which sell tax-sheltered annuities at the University; a questionnaire will be sent to all companies and their responses will be compiled and published.

Old Business

Regarding the changes in rates for official travel, Prof. Adkins pointed out that there had been no increase in the food allowance. He suggested that the recent inflation made the old one inadequate. Prof. Fulton turned the matter over to the Welfare Committee.

The meeting adjourned at 6:30 p.m.

Respectfully submitted,

Russell D. Shannon  
Secretary

Members absent: W. E. Johnston; D. O. Ezell; F. H. Hedden; W. F. Beckwith; W. F. Steirer; A. L. Recoulley; M. D. Sherrill.

A SYMPOSIUM SPONSORED BY THE COLLEGE OF LIBERAL ARTS AND THE SOUTH  
CAROLINA COMMITTEE FOR THE HUMANITIES

"Two Decades of Change: The South Since the Supreme Court Desegregation Decision." On Friday morning, September 28, in Daniel Auditorium at 10:30, after an introduction by President Robert C. Edwards, the speakers on the topic, "Two Decades of Change: The Perspectives of Political Science and Economics," will be Ray Marshall, Professor of Economics and Director, Center for the Study of Human Resources, University of Texas, and Samuel DuBois Cook, Professor of Political Science, Duke University, and President, Southern Political Science Association, 1972-73. The panel discussion that will follow will be chaired by Charles W. Dunn, Head, Department of Political Science, Clemson University, and will include James M. Stepp, Alumni Professor of Agricultural Economics, Clemson University and Numan V. Bartley, Associate Professor of History, University of Georgia.

On Friday afternoon at 2:00, the topic will be "Two Decades of Change: The Perspectives of Literature and Sociology." The speakers will be Walter Sullivan, Professor of Fiction Writing and of Modern British and American Literature, Vanderbilt University, and Ernest Q. Campbell, Professor of Sociology and Dean of the Graduate School, Vanderbilt University. The panel discussion will be chaired by H. M. Cox, Dean, College of Liberal Arts, Clemson University, and will include Alfred S. Reid, Professor of English, Furman University, and William C. Capel, Associate Professor of Sociology, Clemson University.

The speaker at the dinner in the Clemson House at 6:30 p.m. will be Paul M. Gaston, Professor of History, University of Virginia.

On Saturday morning, September 29, at 10:00, the topic will be "Changes in South Carolina Since the Supreme Court Desegregation Decision." The speakers will be Robert McCormick Figg, Jr., Dean Emeritus, School of Law, University of South Carolina; Charles H. Wickenberg, Associate Editor, Columbia State; William B. Royster, Superintendent, District Five, Anderson County Schools; Theo Mitchell, Attorney at Law and President of the South Carolina Council on Human Rights; and Jack E. Tuttle, Associate Professor of Political Science, Clemson University. The panel will be chaired by Claud B. Green, Dean of Undergraduate Studies and Professor of English, Clemson University.

A fee of \$6.00 covers all panel sessions, the social hour, banquet, and address on Friday evening. For those who do not wish to attend the social hour and banquet, but wish to attend all the sessions, the registration fee is \$1.00. Checks payable to Clemson University may be sent to Richard J. Calhoun, Department of English or to Ernest M. Lander, Jr., Department of History.

## FACULTY RESEARCH COMMITTEE GRANT APPLICATIONS

Proposals for faculty research committee grants should be in the Office of University Research, 107 Martin Hall, not later than November 1, 1973. Application forms may be secured in the Office of University Research. Only proposals using the Faculty Research Committee application form will be considered by the committee.

The committee makes awards to new faculty members initiating research, to faculty members initiating research in a new area, and in areas where other sources of support are inadequate or non-existent.

## AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

J. C. Hite (Assoc Prof) presented a paper co-authored with J. W. Fort (former Grad Asst in Economics) at the joint meetings of the American and Canadian Agricultural Economics Associations at the University of Alberta, Edmonton on Aug. 8-11. The paper is entitled, "Possibilities for Synthesizing Input-Output Coefficients for Small Areas in Rural Development Research."

J. C. Hite is author of a review of the book, World Ecocrisis, edited by Kay and Skolnikolfe, in the September issue of International Development Review.

## AGRONOMY AND SOILS

R. E. Currin III (Asst Prof, Pee Dee Station) gave a paper entitled, "Pre-determined Nicotine Content in Low Profile Once-Over Harvested Tobacco" at the 25th Tobacco Worker's Conference in Hamilton, Ontario, Aug. 9. Co-authors, J. B. Pitner (Prof and Supt, Pee Dee Station) and J. G. Alphin (Assoc Prof of Agr Eng, Pee Dee Station).

## CHEMISTRY

Frederick J. Lindstrom (Prof) and Ann Edwards Womble (former Grad Stu and Hd, Environmental-Chemistry Technology Dept., Greenville TEC) published, "Locating the More Acidic Hydroxyl Group on Dihydroxy Compounds - o,o'-Dihydroxyazo-Dye Metal-Ion Indicators," Talanta, 20, 589 (1973), The International Journal of Analytical Chemistry.

H. G. Spencer (Prof and Hd) and Anne Beyerlein (former Post Doc Assoc) presented a paper, "Structure Changes in Glassy Hydrophilic Polymers under the Stress of Water Sorption," at the 12th Prague Microsynposium on Macromolecules, Aug. 20-23, in Prague, Czechoslovakia.



## CIVIL ENGINEERING

Subhash C. Anand (Assoc Prof) has a paper entitled, "Design Loads on Rigid Pipes," published in the Proceedings of the International Conference on Computer Orientated Design of Civil Engineering Structures held at the University of Aston in Birmingham, England on Sept. 3-5.

William Baron (Assoc Prof) has been nominated for the Presidency of the South Carolina Section of the American Society of Civil Engineers.

Subhash C. Anand has been invited to serve on Technical Committee #15, "Plastic Analysis and Design," of the Joint Committee on Tall Buildings which is an international group established to study and report on all aspects of the planning and design of tall buildings. The other two members of Technical Committee #15 are Prof. C. Massonnet, University of Liege, Belgium, and Prof. E. Popov, University of California, Berkeley.

Herbert W. Busching (Assoc Prof and Hd) has received a grant from the Associated General Contractors for a study entitled, "Educational Programs for Small Contractors - A Need Survey and Pilot Development."

Herbert W. Busching was an invited speaker at the North Carolina Concrete and Masonry Association meeting held in Wrightsville Beach, N. C., Aug. 13.

## COLLEGE OF EDUCATION

H. F. Landrith (Dean) conducted an in-service training workshop on accountability for more than 300 teachers of Anderson School District #1 at Palmetto High School in Williamston on Aug. 22.

## ECONOMICS DEPARTMENT

Bruce Yandle (Assoc Prof and Hd) has had the following articles accepted for publication: "Welfare Programs and Donor-Recipient Adjustment," Public Finance Quarterly; "Mixed Goods and Bads," Public Choice.

Bruce Yandle and Andy H. Barnett (Grad Stu, Univ of Va) have the article, "Old Answers to New Problems: Henry George, Property Rights, and Environmental Quality" accepted for publication in The American Journal of Economics and Sociology.

### ELECTRICAL AND COMPUTER ENGINEERING

B. E. Gilliland (Assoc Prof) participated in the First Instrument Society of America Medical Instrumentation Safety Standards Task Force held at Haverford College, Haverford, Penn., Aug. 8-11. Dr. Gilliland was selected to chair the subcommittee SP 62.3 on Specifications and Tests for Medical Instrumentation. This subcommittee drafted a proposed ISA Standard on Specifications and Tests for Risk Current in Medical and Dental Equipment during this first meeting.

### ENGLISH DEPARTMENT

Rodney O. Rogers (Asst Prof) published a poem, "Fallfire," in the June issue of The South Carolina Review.

### ENTOMOLOGY AND ECONOMIC ZOOLOGY

G. R. Carner (Asst Prof) and Merle Shepard (Asst Prof) went to Baton Rouge, La., Aug. 22-24 to attend and participate in the planning sessions for the NSF-IBP Soybean Pest Management Project.

T. E. Skelton (Assoc Prof) participated in the Apple Field Day at Long Creek, on Aug. 9 and discussed, "The Biology, Effects and Control of Mites on Apples."

### ENVIRONMENTAL SYSTEMS ENGINEERING

E. S. Iracki (Asst Prof) and H. V. Malmstadt (Univ of Ill) published a paper titled, "Ratemeter Interface for a Minicomputer-Controlled Reaction-Rate Instrument Analytical Chemistry, 45, 1766 (1973).

E. S. Iracki was an invited instructor in a two week short course at the University of Illinois at Champaign-Urbana: The Short Course, "Laboratory Instrumentation and Automation," included a one week segment devoted to interfacing the minicomputer to laboratory instruments and was under the direction of Dr. Iracki and Dr. Dave Larsen (VPI).

E. S. Iracki received a gift of electronics modules valued at approximately \$2000 from Dr. David Larsen of the VPI Chemistry Dept. The modules are to be used for research and for instruction in laboratory instrumentation and automation.

L. G. Rich (Prof) presented a paper entitled, "Ecosystem Simulation as a Method of Teaching Aquatic Chemistry" on Aug. 29 at a meeting of the American Chemical Society in Chicago. T. M. Keinath (Assoc Prof) was co-author of the paper.

A new textbook entitled Environmental Systems Engineering authored by L. G. Rich (Prof) and published by the McGraw-Hill Book Company is the featured selection of the Civil Engineering Book Club.



FOOD SCIENCE

The following research papers have been published, F. B. Wardlaw (Grad Stu), L. H. McCaskill (Lab Tech) and J. C. Acton (Asst Prof), 1973, "Effect of postmortem muscle changes on poultry meat loaf properties." J. Food Sci. 38:421-423. J. C. Acton, 1973, "Composition and properties of extruded, texturized poultry meat." J. Food Sci. 38:571-574.

Robert F. Borgman (Prof) was Director of a short course for sanitarians, Sewage Disposal Systems for Single Family Dwellings and Small Subdivisions, Financed by USPHS, July 20 - Aug. 3.

FORESTRY

W. A. Shain (Assoc Prof) president of the Georgia-South Carolina Section of Photogrammetry presided over the Section's meeting in Atlanta on Aug. 21. He also participated in a panel discussion concerning the need for licensing professional photogrammetrists in Georgia.

John R. Warner (Prof) presented a paper entitled, "Evaluating Forest Investments Through Stand Inventory Projection," at a meeting of the Forest Resources Inventory subject group of the International Union of Forest Research Organizations in Nancy, France, June 25-29.

Thomas E. Wooten (Assoc Prof) and Malcolm K. Cleaveland (Grad Stu) presented a paper entitled, "Wood Property Evaluations by X-ray Analysis of Increment Cores" at the 27th annual meeting of the Forest Products Research Society in Anaheim, Calif., June 24-28.

Carl L. Lane (Assoc Prof) was elected Secretary at the annual meeting of the Southern Forest Environment Research Council in Stillwater, Okla., July 29-Aug. 2. The 1974 annual meeting will be held at the Belle W. Baruch Research Institute, Hobcaw Barony, Georgetown.

GEOLOGY

V. S. Griffin, Jr. (Assoc Prof) published, "Geology of the Old Pickens Quadrangle, South Carolina," S. C. Division of Geology Map Series (MS-18), 1973, 54 pp.

## HISTORY

J. L. Arbena (Assoc Prof) has published, "Colombian Interpretations of the Role of the United States in the Independence of Panama," in the North Dakota Quarterly (Spring, 1973).

J. E. Sargent (Asst Prof) has completed an oral history for the Columbia University Oral History Research Office with Anna Roosevelt Halsted, daughter of Franklin D. Roosevelt.

J. W. Barnhill (Asst Prof) has published with Paul Dukes, "The North-east Scots in Muscovy in the Seventeenth Century," in Northern Scotland -- published by the Centre for Scottish Studies, University of Aberdeen, (Dec. 1972).

Richard L. Saunders (Asst Prof) is presently serving as intervenor in the Interstate Commerce Commission Ex Parte 293, Eastern Rail Crisis Investigation.

## INDUSTRIAL EDUCATION

A. F. Newton (Prof and Hd) presided over the Thursday morning session of the Trade and Industrial Education Section of the South Carolina Annual Vocational Teachers Conference held at Winthrop College, Aug. 15-17. Dr. Newton also chaired the panel on "Current Issues" at the Aug. 15 afternoon session. Dr. Newton addressed the pre-vocational teachers on Friday morning, Aug. 17, using as his topic, "Innovations - An Excellent Key." He also conducted a group meeting on D.O. - Cooperative at the Aug. 17 morning session of the conference.

W. E. West (Assoc Prof) and T. E. Pinelli (Grad Stu) have published a paper, "The Current Status of Elementary School Industrial Arts" in the MAN/SOCIETY/TECHNOLOGY, May/June 1973.

F. A. Bosdell (Asst Prof) presented a talk on "Is Your Program Paying Its Way?" at the Thursday morning session of the Trade and Industrial Education Section of the South Carolina Annual Vocational Teachers Conference held at Winthrop College, Aug. 15-17. Professor Bosdell also conducted a group meeting on Textiles at the Friday morning session of the conference.

## INDUSTRIAL MANAGEMENT

Earl E. Burch (Asst Prof) has had the following articles accepted for publication: "Institutional Contributions to Scholarly Journals of Business," Journal of Business; "Production Management Is Alive and Well," Academy of Management Journal; "Opportunity Cost and Incremental Cost: An Attempt to Define in Systems Terms: A Comment," Accounting Review.

INDUSTRIAL MANAGEMENT (Continued)

Carl L. Dyer (Assoc Prof) was a participant in a two-week seminar on "The Use of the Computer in Management and Management Education." The program was hosted by the University of Colorado on July 15-18 under the sponsorship of IBM, The Center for Technical and Management Programs and the American Assembly of Collegiate Schools of Business.

Happy Pierce (Instr) passed the Certified Public Accounting Examination in May 1973, making him eligible for certification in the state of Arkansas.

James A. Turner, Jr. (Assoc Prof) has been elected Trustee of the South Carolina Association of Certified Public Accountants Educational Fund, Inc.

James A. Turner, Jr. has been selected to serve on the Program Coordination Committee of the multi-million dollar Continuing Professional Education Division of the American Institute of Certified Public Accountants. This committee has been charged to study and develop policies and procedures for cooperative preparation, production, promotion, scheduling and distribution of continuing professional education programs.

B. J. Todd (Prof) and E. E. Burch (Asst Prof) have a paper, "Prediction of Hospital Utilization Using Exponential Smoothing Techniques" accepted for publication in the Journal of American Institute of Decision Science.

LANGUAGES

Gaston J. Fernandez (Assoc Prof) spent three weeks in May in Ecuador, continuing his research on the modernistic, Ecuadorian poet, Alfonso Moscoso Sanchez. His trip was supported by a Faculty Research grant.

Gaston J. Fernandez participated in the Six Weeks Summer Program in Madrid, Spain, sponsored by Augustana College, Rock Island, Ill. Seven Clemson students (majoring or minoring in Spanish) attended the program.

MATHEMATICAL SCIENCES

Starting Sept. 15, 1973, Dr. John Kenelly (Prof and Hd) will be on sabbatical leave at the Dept. of Operations Research, Stanford University. In his absence, Dr. Stanley M. Lukawecki (Prof) will serve as Acting Head of the Department of Mathematical Sciences.

## MECHANICAL ENGINEERING

T. Yang (Prof) and Dr. J. S. Tennant (Univ of Tenn) have published a paper entitled, "Turbulent Boundary-Layer Flow from Stationary to Moving Surfaces," in the Journal, American Institute of Aeronautics and Astronautics, Vol. 11, pp. 1156-1160, August, 1973.

## PHYSICS AND ASTRONOMY

Burt V. Bronk (Assoc Prof) published a paper in the June issue of Biophys. Biochem. Research Communications entitled, "Thermal Enhancement of DNA Damage in Human Cells." Co-authors were R. Wilkins and James Regan of Oak Ridge National Laboratory.

Robert L. Chaplin (Prof) published a paper entitled, "Anisotropy of the Threshold Energy for Production of Frenkel Pairs in Copper and Platinum," in the July 15, 1973 edition of Physical Review B, Vol. 8, p. 553. Co-authors were P. Jung, H. J. Fenzl, K. Reichelt and P. Wombacher of Julich, Germany.

C. W. Ulbrich (Assoc Prof) published a paper in the Journal of Applied Meteorology, Vol. 12, No. 3, pp. 551-553, April, 1973 entitled, "Radar Observations of Fire-Induced Rain Clouds." Co-author was T. R. Morris of the University of Chicago, Chicago, Ill.

## POULTRY SCIENCE

D. L. Cross (Asst Prof) attended the annual meeting of the American Society of Animal Science, July 28-Aug. 1 at the University of Nebraska, Lincoln, Neb. and presented a paper, "Plasma Amino Acids in Fed and Fasted Wethers," co-authored by J. A. Boling, D. G. Ely and W. R. Burris of the University of Kentucky.

## RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) has recently been certified as a Professional Member of the Association for Creative Change in Religious and Other Social Systems. This is the highest certification awarded by this organization for leaders in human relations training, organization development and planned change in human systems.



## TEXTILE DEPARTMENT

Robert H. Barker (J. E. Sirrine Assoc Prof) presented an invited lecture, "Mechanism of Flame Retardant Action in Textiles," at National Bureau of Standards, Washington, D.C. in Action Series, IV, Fire, on Aug. 22.

John Muehlbauer (Doctoral Candidate, Mech Engr), Donald W. Lyons (Assoc Prof), John D. Hatcher (Asst Prof), and J. E. Sunderland (Univ of Mass) presented a paper at the 14th National Heat Transfer Conference in Atlanta. The title of the paper was "Transient Heat Transfer Analysis of Alloy Solidification."

Donald W. Lyons and John D. Hatcher received notification from the U. S. Dept. of Agriculture of a cooperative research agreement of \$30,000 to "Investigate Methods and Techniques for Measuring Factors Contributing to Improved Spinning Performance and Product Quality of Cotton Fibers and Yarns." This renewal for 1973-74 brings the total support of this research program to in excess of \$150,000 during the past several years.

John J. Porter (Assoc Prof) and Marshall White (Doctoral Candidate) presented a paper entitled, "The Kinetics of Sorption of Disperse Red II into Polyester Fiber," at the American Chemical Society meeting in Chicago, Ill., Aug. 29.

T. D. Efland (Assoc Dean and Prof) and E. A. Vaughn (Assoc Prof) presented papers at the Southern Textile Association Symposium on "Open-End Spinning" held at Clemson University, Aug. 24. Dean Efland spoke on "The Status of Open-End Spinning in Japan" and Dr. Vaughn discussed "New and Novel Spinning Systems."

## VOCATIONAL EDUCATION MEDIA CENTER

Betty P. Watkins (Asst Prof) attended the annual Vocational Teacher's Conference at Winthrop College on Aug. 15-17 and presented an illustrated talk on "Teaching Materials for '73" to the Home Economics Education Section. Mrs. Watkins gave a presentation on "Teaching Resources for Occupational Home Economics" and "Innovations in Clothing Teaching Materials" to the Occupational Home Economics group session.

B. Verner Burkett (Assoc Prof) participated in the South Carolina Vocational Teacher's Conference held at Winthrop College on Aug. 15-17 and gave a presentation on "Developing Instructional Materials" to the Pre-Vocational Education Section.



18 . September 15, 1973

CALENDAR OF CAMPUS EVENTS

September

- 17--French Film, Daniel Auditorium, 7 p.m.
- 19--Sigma Xi Monthly Luncheon Meeting: Dr. Donald N. Baker, Alumni Visiting Professor, "Simulation as a Research Tool," Clemson House, 12 noon
- 21--Soccer: Emory, here, 3 p.m.
- 22--Cross Country: South Carolina, here
- 23--University Union Fine Arts Film: "400 Blows," Holtzendorff YMCA, 8 p.m.
- 24--Joint Seminar: Agronomy and Soils and Agricultural Engineering Departments, Dr. Donald N. Baker, Alumni Visiting Professor, "Application of Systems Methods to Crop Production," A-203 P&AS Bldg., 4 p.m.
- 26--Fort Hill Quarterback Club Luncheon, Clemson House, 12 noon
- 27--College of Liberal Arts Lecture Series, the Future of the American Presidency  
Congressman John B. Anderson on "A Republican Looks at the Presidency,"  
Daniel Auditorium, 3:30 p.m.
- 27--Short Course: "Plastic Design of Steel Structures"
- 28--JV Football: Georgia, here, 2 p.m.
- 28-29--Symposium: "Changes in the Southeast," Daniel Auditorium, 9 a.m.

October

- 4--Clemson University Woman's Club, "The Governor's Lady" (Mrs. John C. West),  
Clemson House, 3:45 p.m.



### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 4

CLEMSON UNIVERSITY LIBRARY  
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OCT 2 1973

October 1, 1973

## Admissions Office Reports On-Campus Enrollment Up 10.2%

Final enrollment figures for the first semester of 1973-74 show on-campus enrollment up 10.2 per cent, according to Woody Marx, associate director of admissions and registration.

On-campus enrollment totals 9,461, which includes 7,960 undergraduate students and 1,501 graduate students, compared with 8,584 on-campus students this time last year.

Enrollment in off-campus graduate programs totals 651, including 515 in institutes for teachers and 136 in the Clemson-Furman MBA program.

Total enrollment for all programs is 10,112.

New undergraduate enrollment, which includes new high school graduates and transfers, is the largest ever at 2,435 students. This figure one year ago was 2,217.

By individual college, the greatest percentage growth in enrollment is shown in Nursing, Architecture, and Forest and Recreation Resources, in that order.

Of the 7,960 undergraduate students enrolled, 2,607 or 32.7 per cent are women, compared to 29.8 per cent this time one year ago. This time five years ago 13.6 per cent of the undergraduate enrollment were women.

The on-campus enrollment includes 131 foreign students representing 37 countries. Forty-six states and the District of Columbia are represented.

Of the 9,461 students on campus, 7,469 are from South Carolina. Outside South Carolina, the five states ranking highest in order of enrollment are New Jersey with 270 students, Georgia 242, North Carolina 214, Maryland 159 and New York 154.

Within South Carolina, all 46 counties are represented with the largest enrollment from Greenville with 1,120, followed by Pickens 843, Anderson 737, Richland 397 and Oconee 358.

## South Carolina Agriculture Plans Mapped at Statewide Seminar Here

Plans for greater development of South Carolina agriculture were considered by some 200 agricultural leaders and government officials at a statewide seminar held at Clemson University September 27-28.

Seminar participants included Assistant Secretary Will Erwin of the United States Department of Agriculture; Governor John West; General William C. Westmoreland, chairman of the Governor's Task Force for Economic Growth; Clemson President Robert C. Edwards; South Carolina Agriculture Commissioner William Harrelson; Luther P. Anderson, dean of the College of Agricultural Sciences; and John R. Tiller of the South Carolina Commission of Forestry.

The seminar was sponsored by Clemson and the Governor's Task Force for Economic Growth in cooperation with the South Carolina Department of Agriculture and State Commission of Forestry.

Realizing that the state's future will in large measure be determined by the effective development of its agriculture and related business, seminar participants objectively studied agricultural problems and worked to develop innovative and practical programs for the future.

Assembly speakers, situation reports and workshop sessions covered a wide range of topics, including land use problems, the plight of the family farmer, crop production, animal production, agricultural marketing and agricultural financing.

#### **Clemson University Housing Institute Will Study Residential Needs in State**

Formation of a Clemson University Housing Institute to promote interdisciplinary research and education on residential housing needs in South Carolina was announced Sept. 25 by Clemson University.

"It is being formed," said Clemson President Robert C. Edwards, "to provide an identifiable unit through which administration of interdisciplinary housing projects can be maintained at the higher education level in South Carolina."

Formation of the institute, continued Edwards, is the culmination of several years' effort by the Clemson University Housing Committee and active projects and programs in housing by interested faculty members from five of the university's colleges.

Edwards said the institute will stimulate development of a coordinated program in housing that will embrace the university's three major functions -- teaching, research, and public service.

"The difficulties consumers are presently encountering in getting adequate housing point up the complex nature of the housing problem in South Carolina and the Southeast," Edwards noted.

"Through this institute the faculty at Clemson will search for the root causes of these difficulties, study changes in family life styles, and recommend realistic approaches for future housing."

Named to head the executive board of the institute, as director, was Dr. Adger B. Carroll, state leader for community and resource development programs for the Cooperative Extension Service. Carroll, a native of Seneca, is also professor of agricultural economics and rural sociology at Clemson.

Also named executive board members were faculty members: Dr. Herbert W. Busching, head of the department of civil engineering; Prof. James E. Dalton, asst. to the dean of the College of Architecture; Prof. Frank H. Hedden, College of Agricultural Sciences; Miss Helen McMillan, Cooperative Extension Service; Mr. Phillip J. Wadsworth, College of Liberal Arts; and Dr. T. Bruce Yandle, head of the department of economics.



## Enrollment, 1964-1973

## Clemson University Summer Sessions

Main Campus

<u>Summer Sessions</u>	<u>First</u>	<u>Second</u>	<u>Total</u>
1964	1533	1202	2735
1965	1833	1383	3216
1966	1803	1736	3539
1967	1974	2006	3980
1968	2435	2385	4820
1969	2371	2101	4472
1970	2319	2109	4428
1971	2400	2292	4692
1972	2779	2453	5232
1973	3592	2675	6267

Sumter Campus

1967	94
1968	107
1969	100
1970	60
1971	85
1972	87
1973	67

Off-Campus Courses

1969	183
1970	424
1971	536
1972	769
1973	587

Total for Main Campus, Sumter Campus,  
and Off-Campus

1967	4263
1968	5066
1969	4873
1970	5058
1971	5425
1972	6207
1973	6921

Student Credit Hour Production  
on Main Campus

1970	23,028
1971	25,586
1972	27,281
1973	27,397

Enrollment of New Students

<u>Summer Sessions</u>	<u>First</u>	<u>Second</u>	<u>Total</u>
1964	170	110	280
1965	217	201	418
1966	73	285	358
1967	21	274	295
1968	36	256	292
1969	34	213	247
1970	94	325	419
1971	90	338	428
1972	42	130	172
1973	63	203	266

Enrollment of Graduate Students

<u>First</u>	<u>Second</u>	<u>Total</u>
267	150	417
298	188	486
324	372	696
342	628	970
500	778	1278
516	621	1137
633	719	1352
841	851	1692
1076	1071	2147
1233	1149	2382

MINUTES OF THE MEETING OF THE EDUCATIONAL COUNCIL, SEPTEMBER 3, 1973

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Joseph B. McDevitt, Walter T. Cox, Luther P. Anderson, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis, and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of August 6, 1973 were approved as submitted.

2. Curriculum Changes

Statement and Recommendation: The Dean of the University recommended and the Council approved by mail ballot the addition to curricula, effective when designated on the appropriate request for approval form as follows:

New Graduate Course

GS 799 Comprehensive Studies

1-15 cr.

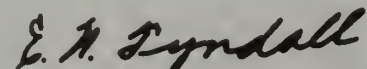
Action: Approved.

3. Clemson University Housing Institute

Statement: A proposal was made for the establishment of a Clemson University Housing Institute to promote interdisciplinary efforts in housing by providing an identifiable structural unit through which adequate financial support and administration of interdisciplinary housing projects can be maintained.

Recommendation: That the establishment of a Clemson University Housing Institute be approved in principle.

Action: Approved.

  
E. N. Tyndall  
Secretary

MINUTES OF THE MEETING OF THE FACULTY SENATE, AUGUST 21, 1973

President Fulton called the meeting to order at 4:15 p.m. He requested that the last two sentences in the second full paragraph on page 2 of the minutes for the July meeting be deleted. He also requested that the third line from the bottom of page 4 be revised to read "bringing about a managerial revolution from within." The revisions were accepted by the Senate and the minutes for the July meeting were approved as revised.

Having heard the report by the University Master Planner, Professor R. D. Eflin, at the July meeting of the Board of Trustees, President Fulton had invited him to present a similar report to the Senate. Professor Eflin showed the Senators a map for the 1,000 contiguous acres around the academic area which he has zoned into "use" areas. In this plan, the "academic" area surrounds the Cooper Library as the focal point and extends to Perimeter Road. Professor Eflin pointed out that it provides ample space for additional building. Flanking this area are the student living, recreational and dining areas which, Professor Eflin said, are in "wonderful proximity" to the academic area.

Professor Eflin then pointed out the "green belt" extending along Highway 93 which he proposed maintaining. He noted that in the future an interchange will probably have to be developed to relieve congestion at the intersection of Highway 76 on Perimeter Road. He suggested that some of the Physical Plant facilities (e.g., Central Receiving, fire fighting, etc.) be removed from their present locations in the center of the campus to the Perimeter Road. He also suggested that the open spaces on campus be made more attractive to invite greater use.

In connection with the traffic and parking situation, Professor Eflin presented another map which showed the recent changes in parking facilities and regulations. He stated that although consideration had been given to such innovations as mini-buses and parking garages in the "inner" campus, it had seemed more economical to develop free parking outside the inner campus for resident students and to allow commuting students to park nearer the inner campus; this arrangement puts everyone within reasonable proximity to the academic area. In the "inner ring" space is now provided for 30-minute parking for students wishing to use the Bookstore, etc. Professor Eflin noted that additional policemen will be required for enforcement of all traffic rules and regulations; there is a plan to experiment with student policemen this fall.

Professor Eflin agreed to the need for bikeways along Highway 93 and Cherry Road. He pointed out that, although the campus was well organized so far as building construction and location are concerned, little thought seemed ever to have been given to the needs of the pedestrians and cyclists. Finally, Professor Eflin discussed the assignment of faculty members to designated parking areas, a policy which is intended to go into effect January 1, 1974. He noted that from the Master Planner's point of view it would be better if no assignments had to be made.

MINUTES OF THE MEETING OF THE FACULTY SENATE, AUGUST 21, 1973 (Continued)President's Report

President Fulton reported on the meeting of the Board of Trustees, July 26, 1973, which he had attended. On the agenda had been the matter of awarding bachelor's degrees to preprofessional degree students. The Board had approved the following recommendation: "That the Administration [of Clemson University] be authorized to formulate and implement fair and equitable procedures for awarding the bachelor's degree to students who have attended Clemson University and who later enroll in an accredited, post-graduate professional college or university." President Fulton pointed out that although the Administration had requested from the Trustees the granting of wide latitude within which an administrative policy could be formulated, the above statement went far beyond the recommendations of Faculty Senate Resolution FS-73-7-4, in which it was stipulated that the baccalaureate degree be awarded "upon successful completion of the equivalent of one academic year in a professional program" and confined the policy to the fields of medicine, dentistry, law, and veterinary medicine. The matter, President Fulton stated, has not been settled since the implementation policy must be formulated, but he expressed the desire that the Senate's resolution be given full consideration by the Administration, particularly in view of the fact that some Senators had argued that even the Senate resolution was too lenient.

Regarding the request for changes in the annual leave policy for 12-month employees (see FS-73-5-3) the Board of Trustees had approved a recommendation leaving the matter in the hands of the University Administration. President Fulton stated that the Administration is considering the matter but no final decision on the matter had been made.

President Fulton noted that in the budget for 1973-74 faculty salaries at the University had increased about 16.3% over the previous year; this increase included the funding of new positions.

President Fulton had also met with Vice President Nicholas in reference to two resolutions passed at the July meeting. He reported that Mr. Nicholas had disagreed with the resolution (FS-73-7-3) requiring the publication of development plans 30 days prior to implementation, since he felt that the Development Office should not have the responsibility of final approval of the working drawings of any project. He felt the Development Office responsibility should end with schematic plans. He also felt that there are already many delays in the processing of working drawings. Mr. Nicholas, according to President Fulton, was "lukewarm" regarding the resolution (FS-73-7-2) requesting an additional faculty member on the Landscape and Site Development Committee. However, Mr. Nicholas agreed to place both resolutions before the Planning Council. Mr. Nicholas also agreed that the Planning Council should meet the year around and should be kept informed of and give advice relative to anticipated implementation of the master plan for development of the University.



MINUTES OF THE MEETING OF THE FACULTY SENATE, AUGUST 21, 1973 (Continued)

Regarding any plan to provide parking spaces in the Bowman Field area, President Fulton stated that members of the Board of Trustees had received a considerable amount of adverse reaction to any such plan and that a petition opposing such a plan had been circulated. A copy of the petition was given by President Fulton to the Welfare Committee of the Senate.

President Fulton said that the Educational Council and the Administration had endorsed the Senate's resolution which would substantially curtail reserved parking spaces. He also noted that the increase in enrollment this fall was greater than had been projected and could have been even greater if more dormitory space had been available. President Fulton urged the Senators to become more familiar with the budgeting formula established by the Commission on Higher Education. Professor Beckwith inquired whether any attempts were being made to modify the CHE formula. President Fulton stated that Dean Hurst had spent considerable time in Columbia directed toward that goal (modification) and that President Edwards had made a number of proposals to the Commission to make Clemson's position regarding the budget formula more nearly equitable.

President Fulton then reported on action taken by the Senate's Advisory Committee. Membership of Ad Hoc Committee B on Faculty Work Loads will be: T. R. Adkins, chairman; P. T. Holmes; K. E. Carpenter; and W. E. West. For University Committees, the following appointments had been made by Dean Hurst following the Advisory Committee's recommendations: S. Sullivan, Archives Committee; O. J. Jacobus, Poisonous Chemicals and Radioactive Materials Committee; W. E. West, Safety and Fire Prevention Committee; and R. L. Cross, Traffic and Parking Committee.

President Fulton thanked V. D. Carmack, K. E. Carpenter, and L. T. Fitch for their assistance in the orientation program for new faculty members. Vice President West had addressed the new faculty members relative to the Faculty Senate, the Faculty Manual and the Student Relations Committee.

President Fulton reported that Professor Corinne Sawyer had requested to be relieved of the responsibility of being the campus representative for the Disney Magic Kingdom Club. Following the suggestion of Professor Baron, President Fulton agreed that the University Personnel Office might handle enrollment in the Club for the faculty.

Finally, President Fulton stated that as of July 27 the Sumter Center is now a University of South Carolina Regional Campus for one year.

Committee Reports

For the Admissions and Scholarship Committee Professor Steirer reported that the Committee will meet with Dean Vickery to discuss the University's admissions

MINUTES OF THE MEETING OF THE FACULTY SENATE, AUGUST 21, 1973 (Continued)

policies; he said that a long agenda has been prepared.

For the Policy Committee, Professor Skelton reported that at the September meeting of the Faculty Senate resolutions will be presented in regard to selection of faculty members to serve on University committees, faculty evaluation of academic administrators, and an operating budget for the President of the Faculty Senate. Professor Skelton also reported that the Faculty Senate President will discuss the policy of advising donors for endowed chairs with the Dean of the University.

There was no report from the Research Committee.

For the Welfare Committee Professor Adkins introduced a RESOLUTION OF APPRECIATION (FS-73-8-1) commending the Administration for reducing salary discrepancies and improving the competitiveness of faculty salaries. Since the Resolution had not been submitted a week in advance, since the Senators did not have copies of the Resolution, and since there was some question as to the urgency of the Resolution, a motion was introduced to table the Resolution. The motion to table passed unanimously.

Professor Ezell reported for Ad Hoc Committee A on the Motor Pool. He said the Committee's first consideration was to define its concerns. The members had agreed that they should be concerned with the services provided by the Motor Pool. From a financial point of view, Professor Ezell said, the Motor Pool is apparently efficient and entirely self-sufficient; this fact had been revealed by an in-depth study by Professors John Kenelly and H. W. Busching. Several matters had been discussed with the Business Office. One was the suggestion that persons applying for cars indicate on the application form whether they would be willing to use their own vehicles; then, in cases of shortage, cars would be assigned first to those people who did not wish to use their own cars. A suggestion was also made to provide space outside the Motor Pool gate to be used for leaving cars when the Motor Pool is closed. The committee members had also requested that, if van and station wagon requests exceed the number available, the department involved be notified so that other arrangements can be made. A shortage of cars seems to be a particular problem during September, October, and November; additional cars would seem to be the necessary solution unless faculty members can be authorized to use their own. Finally, Professor Ezell stressed the urgency of persons using Motor Pool cars to return cars when scheduled; he suggested a penalty for those who don't. Professor Ezell said that there had been some indication that the requests would be given favorable consideration. However, he recommended that the Ad Hoc Committee not be abolished until it can be determined if action will be taken.

Regarding University Policy 5034 which permits faculty and staff members to use their own cars only if their trip exceeds 300 miles, the possibility of eliminating this distance requirement was raised. Professor Ezell pointed out

MINUTES OF THE MEETING OF THE FACULTY SENATE, AUGUST 21, 1973 (Continued)

hat if people did not use the Motor Pool, there would be no need to have one. Ms. Kelly pointed out that the difficulty of getting motor pool cars has been aggravated by the new traffic regulations which close off part of the campus; she suggested that this situation made reconsideration of Policy 5034 more urgent.

New Business

Professor Jacobus introduced a FACULTY OMBUDSMAN RESOLUTION (FS-73-8-2), jointly sponsored by Professor Baron:

WHEREAS communications between individuals and groups of individuals within a large academic community are necessarily limited, and

WHEREAS questions can occur between individuals or groups of individuals within an academic community for which there currently exist no channels of expeditious resolution, and

WHEREAS channels of communication between individuals, free exchange of information, and resolution of grievances are necessary for the affable operation of an academic community,

BE IT RESOLVED that an individual, to be known as the Faculty Ombudsman, be appointed from the University Faculty by the President of the University, such individual being among nominees suggested by the Advisory Committee of the Faculty Senate, to serve for a period of two years. The Faculty Ombudsman, by mutual consent of the President of the University and the Advisory Committee of the Faculty Senate, may be reappointed for additional terms.

BE IT FURTHER RESOLVED that the academic duties of the Faculty Ombudsman shall be commensurate with the time demands imposed by his additional duties as Faculty Ombudsman,

That the Faculty Ombudsman shall have direct access to any individual for pertinent discussions concerning any question, and

That the duties of the Faculty Ombudsman shall be the expeditious resolution of any question between individuals or groups of individuals, or, failing this, the transmission of said question to further available appropriate channels for dealing with the unresolved matter.

Professor Jacobus said that the ombudsman would be a general information officer. Professor Baron, referring to problems involving the payroll, said that the ombudsman could help cut red tape. Professor Steirer argued that the ombudsman would tend to become an administrator and have a lot of paperwork to do.



MINUTES OF THE MEETING OF THE FACULTY SENATE, AUGUST 21, 1973 (Continued)

Professor Baron responded that he would merely be an expediter. Professor Cross suggested that the outgoing President of the Faculty Senate would be an appropriate ombudsman. Professor Bauld inquired whether one man could handle the load of work. Professor Jacobus stated that, at least at Princeton, the ombudsman simply channels problems to the proper areas.

The Resolution passed.

In remarks prior to adjournment of the Senate, President Fulton noted that the Administration seemed to have acted vigorously to remove unusual faculty salary differentials and to remove reserved parking. Moreover, it is clear that our Administration through the Council of Presidents of public S. C. colleges and universities is working to integrate TIAA into the S. C. Retirement System. Dr. Edwards has appointed Dr. E. L. McLean (Ag. Econ. and Rural Sociology) to the TIAA-S. C. Retirement System Committee of the Council of Presidents.

The meeting adjourned at 6:55.

Respectfully submitted,

Russell D. Shannon  
Secretary

Members absent: L. T. Fitch, C. R. Dillon.

COLLEGE OF LIBERAL ARTS

The College of Liberal Arts will sponsor the publication of the South Eastern Latin Americanist, the newsletter of the Southeastern Conference on Latin American Studies, for a three-year term. J. L. Arbena (Assoc Prof of History) will serve as editor of the newsletter and secretary-treasurer of SECOLAS. Gaston Fernandez (Assoc Prof of Languages) and Alejandro Velez (Instr of Economics) will serve as assistant editors. Recent sponsors have been the University of Florida and the University of Alabama.

COLLEGE OF ARCHITECTURE

October 2 - November 2, Foundry Art Exhibit, Lee Hall Gallery. John Acorn, sculptor at Clemson, has spent much time at a foundry in Anderson where he does his castings. The objects in this exhibit were found there and are patterns for machines. The viewer is asked to transcend the industrial functions of these objects and transform them into art objects manifesting a high degree of aesthetic appreciation.



MINUTES OF THE MEETING OF THE UNDERGRADUATE COUNCIL, MAY 24, 1973

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Richard J. Calhoun, Bingham M. Cool, Arline M. Duvall, John D. Fulton, Ralph W. Gilchrist, Malcolm J. Skove, Chester R. Smith, and Kenneth N. Vickery.

The minutes of the April 6, 1973 meeting were corrected and approved.

A request to grant the bachelor's degree from Clemson University to qualified students who have successfully completed three years at Clemson and one year in an accredited, post graduate, professional school was presented.

After considerable discussion the following recommendation was adopted in principle: It is recommended (1) that the policy entitled "Discontinuance of Special Three-Year Pre-Medical Policy for the Bachelor's Degree" adopted on March 22, 1961, be and hereby is rescinded, and (2) that the administration be authorized to formulate and implement fair and equitable procedures for awarding the bachelor's degree to students who enter professional, post graduate, accredited schools after three years of undergraduate work and who complete there the necessary amount of course work which will entitle them to a bachelor's degree.

A copy of recommended procedures and regulations for awarding the bachelor's degree is attached.

Procedures and Regulations for Awarding the Bachelor's Degree to Clemson University Students Who Have Completed a Minimum of Three Years Toward a Bachelor's Degree and Who Have Earned Enough Credit Hours in a Professional, Post Graduate, Accredited School to Complete the Requirements for a Bachelor's Degree.

Clemson University undergraduates making satisfactory progress toward a degree and who have completed all requirements of the first three years in the degree program in which they are enrolled at the time they leave the University may be awarded a bachelor's degree from Clemson University if the following conditions have been met:

1. Thirty of the last thirty-six hours must have been taken at Clemson.
2. The student must have completed at a professional, post graduate, accredited school on a satisfactory basis enough credit hours to equal those required in the last year for the degree toward which he was working when he was last enrolled as a Clemson University student.

MINUTES OF THE UNDERGRADUATE COUNCIL MEETING, MAY 24, 1973 (Continued)

The student who has satisfactorily met these conditions will apply for a pre-professional B.A. or B.S. degree from the faculty of the College in which he was enrolled when he was last a Clemson University undergraduate. Upon the recommendation of this College the University will award the degree.

The pre-professional B.A. or B.S. Degree requires only that the student complete satisfactorily at Clemson all requirements of the first three years in the degree program in which he is last enrolled at Clemson and that he complete satisfactorily in a professional, post graduate, accredited school the remaining one-fourth of the credit hours required.

Only students who have satisfactorily completed the required number of credit hours in a professional school will be considered for the pre-professional B.A. or B.S. Degree.

Individuals who have attended Clemson and have qualified for the pre-professional bachelor's degree under the above regulations may apply for the degree provided they have not received a bachelor's degree from some other institution.

FORESTRY

"The Hobcaw Story" a film directed by Lewis W. Riley (formerly Visual Instruction Editor in Agricultural Communications) has been awarded third place in national competition in the Society of American Foresters' Forestry Film Festival. The winner was "Everlasting Forest" presented by the St. Regis Pulp and Paper Company; second was "Trees and People" by the Simpson Lumber Company. "The Hobcaw Story" weaves the history and ecology of Hobcaw Barony in with the program of the Belle W. Baruch Foundation and describes the research of Clemson's Belle W. Baruch Research Institute. The film was shown at the annual meeting of the Society of American Foresters in Portland, Oregon.

R. M. Allen (Prof and Hd) presided over the Forest Tree Physiology Workshop held at Hobcaw Barony on Sept. 5-6. D. D. Hook (Director) moderated one of the sessions.

MINUTES OF THE COMPUTER ADVISORY COMMITTEE MEETING, JUNE 5, 1973

Present: J. C. Peck, presiding, J. P. Crouch, C. Dimmock, W. E. Johnston, R. J. Knapp, J. S. Lytle, M. C. Palmer, A. E. Schwartz, K. N. Vickery, M. L. Wolla, R. F. Zant, and R. E. Chapel, Secretary.

1. The minutes of the previous meeting were amended to include a more thorough account of a recommendation prepared by the Operations Subcommittee.
2. A recommendation from the Technical Advisory Subcommittee which had been referred back to that body for further study was resubmitted in modified form.

The Technical Advisory Subcommittee of the University Computer Advisory Committee recommends that each person wishing to acquire remote job entry or terminal equipment on the campus for use with the University Computer Center be strongly advised by the purchasing agent to seek the advice of the Technical Advisory Subcommittee before proceeding with such acquisition. It is further recommended that the Subcommittee be furnished a copy of each letter of intent which is given to a vendor.

The committee approved this recommendation.

3. Dr. Peck read three documents: a memo from Dr. Kenelly to Professor Palmer proposing acquisition of interactive terminal facilities for students and faculty in Martin Hall; a memo from Professor Palmer to Dr. Lambert, Chairman of the Technical Advisory Subcommittee, discussing Dr. Kenelly's proposal; and Dr. Lambert's reply, recommending implementation of the proposal. After some discussion, a motion was introduced to put the committee on record as concurring with Dr. Lambert's recommendation. The motion was not seconded. Further discussion was scheduled for the next meeting.
4. Dr. Peck read a document from the Technical Advisory Subcommittee expressing "concern that it is not being consulted on hardware matters of considerable importance to the campus computer operations," and requesting the Director of the Computer Center "to supply us with sufficient information . . . to allow us to function adequately."

Professor Palmer replied that the presence on the subcommittee of a Computer Center staff member was assumed to be an adequate mechanism of communication, and that information concerning all of the actions specified in the subcommittee's charge had been transmitted in this manner.

MINUTES OF THE COMPUTER ADVISORY COMMITTEE MEETING, JUNE 5, 1973 (Con't)

There followed a general discussion of the functions of the Computer Advisory Committee and its subcommittees, in which it was observed that these groups had been more effective as communications media than as advisory bodies. Professor Palmer pointed out the necessity of long-range planning, and requested recommendations from the committees for incorporation into this summer's preliminary budget for fiscal '74-'75.

5. Minutes of the April meeting of the Operations Subcommittee were read. They included two recommendations for the consideration of the general committee:

. . . that the Computer Center pricing procedure be uniformly applied to all users being funded for computing facilities.

. . . that the graduate student accounting system be changed to uniquely identify each user, and that a monthly report be generated showing current and cumulative usage by each user. The director of the center will monitor usage and after appropriate consultation with the user, Department Head, Dean, etc., recommend to the Graduate Dean that unreasonable usage be terminated."

The committee approved these recommendations.

6. Minutes of the June meeting of the Operations Subcommittee were read. They included the recommendation "that the Computer Center formulate a pricing procedure, to be used as soon as possible, which charges for usage of each component of the total Computing Facility." It was noted that the recommendation was independent of the manner of direct billing to departments.

This recommendation will be discussed and acted upon at the next meeting.

FACULTY RESEARCH COMMITTEE GRANT APPLICATIONS

Proposals for faculty research committee grants should be in the Office of University Research (107 Martin Hall) not later than November 1, 1973. Application forms may be secured in the Office of University Research. Only proposals using the Faculty Research Committee application form will be considered by the committee.

The committee makes awards to new faculty members initiating research, to faculty members initiating research in a new area, and in areas where other sources of support are inadequate or non-existent.



MINUTES OF THE MEETING OF THE AUDIO VISUAL COMMITTEE, MAY 8, 1973

Present: Michel W. Jutras, Revis M. Frye, William F. Beckwith, Samuel Wang, Betty P. Watkins.

The meeting was called to order at 3:00 p.m. by Chairman Jutras. Minutes of the April meeting were read and approved. Chairman Jutras called for old business.

Dr. Beckwith handed each member a revised information sheet of the services of the University Communications Center. The committee reviewed the information and discussed suggested changes. Chairman Jutras asked that Dr. Beckwith forward an amended copy of the information to Mr. Harry Durham for review and approval.

Mr. Frye reported for the sub-committee on software. A list of books relating to audio visual instruction and a resource list for securing all types of software was made available to the committee.

Chairman Jutras called for an evaluation of the audio visual display, April 27-28, co-sponsored by the audio visual committee and the American Chemical Society. Committee members present reported having visited the display and agreed that a lack of publicity was partly responsible for the limited number of individuals visiting the display on Friday, April 27.

Chairman Jutras called for new business. The main item of business was the decision to write Mr. Durham and request that he conduct a seminar on instructional media for interested individuals.

Chairman Jutras announced that the committee would not meet during the summer unless the need should arise.

The meeting was adjourned at 3:40 p.m.

ELEMENTARY AND SECONDARY EDUCATION

Oliver Lumpkin (Assoc Prof) served as Consultant to the State Department of Education, Special Services Division during the Summer Conference for vocational teachers, Aug. 17 at Winthrop College. The conference focused on "Children With Special Needs."

Oliver Lumpkin has been asked to serve on the Executive Council of the South Carolina Personnel and Guidance Association as Chairman of the Association for Counselor Education and Supervision Committee.

## BIOCHEMISTRY

J. M. Shively (Prof and Hd) attended the First International Congress of Bacteriology in Jerusalem, Israel on Sept. 2-7 and presented a paper entitled, "Functional organelles in procaryotic cells: The polyhedral inclusions bodies (carboxysomes) of Thiobacillus neapolitanus."

## CHEMICAL ENGINEERING

S. S. Melsheimer (Asst Prof) has received approval by the Atomic Energy Commission of a research proposal entitled, "Mathematical Modeling of Donnan Dialysis, A continuous Ion Exchange Membrane Process." The \$13,515 contract covers one year beginning September 1, 1973.

D. F. Bruley (Prof) paid a NIH sponsored visit to the Max Blanck Institute of Systems Physiology in Dortmund, Germany to establish joint research projects and continue those in progress related to transport and autoregulatory processes in the microcirculation, July 1973.

D. F. Bruley paid a NIH sponsored visit to Cal Tech, University of Southern California and University of California Medical School at San Francisco to evaluate present research projects related to chemotransport in brain microcirculation, August 1973.

D. F. Bruley presented a paper and published in the proceedings of Summer Computer Simulation Conference, "Oxygen Transport in the Brain Microcirculation by a Hybrid Computer Non linear Monte Carlo Method," with Dr. Hunt, Dr. Bicher, and Dr. Knisely (Profs at Medical University) in Montreal, Canada in July.

D. F. Bruley presented a paper and published in the proceedings of the International Symposium on Regulation and Control in Physiological Systems, "Auloregulation of Chemotransport to Brain Tissue," with H. I. Bicher, M. A. Knisely and D. D. Reneau (Prof, La Tech) in Rochester, N.Y. in August.

R. C. Harshman (Prof) presented a paper, "Mathematical Modeling of Concentration Polarization in Ultrafiltration" at the 1973 Joint Meeting of the Atlanta, Central Florida, Coastal Georgia, Peninsular Florida and Savannah River Sections of the American Institute of Chemical Engineers held May 18-20 at Daytona Beach, Fla.

R. C. Harshman has been elected Vice-Chairman of the Western South Carolina Section of the American Institute of Chemical Engineers.

## CIVIL ENGINEERING

Pat F. Rad (Asst Prof) has recently joined the Civil Engineering faculty. Dr. Rad will be teaching in the area of materials and has had recent experience with the U.S. Bureau of Mines in St. Paul, Minn. He received his M.S.C.E. degree from Ohio State University and his Ph.D. from the Massachusetts Institute of Technology.

A plaque in commemoration of 50 years of membership and service was received by the American Society of Civil Engineers' Student Chapter at the South Carolina section meeting in Columbia on Sept. 7. The plaque expressed appreciation to the Clemson University chapter for continuous dedication to the aims, purposes, and welfare of the Society.

Herbert W. Busching (Assoc Prof and Hd), principal investigator, and Bill Murchison (Grad Stu) will be conducting a study entitled, "Educational Programs for Small Contractors - A Need Survey and Pilot Development" which is funded by a \$7,000 grant to Clemson University by the Associated General Contractors.

The Dept. of Civil Engineering has recently received \$500 to be awarded as a scholarship to a junior or senior civil engineering student who has graduated from a South Carolina high school. The presentation of this gift was made by the South Carolina Aggregate Producers Association; Mr. Kenneth Crowson, Executive Director.

## ENGLISH DEPARTMENT

Jerome Mandel (Assoc Prof) has published, "Lancelot and Tristan: The Prince as Bird" in the current issue of Studies in Medieval Culture.

## ENVIRONMENTAL SYSTEMS ENGINEERING

J. F. Andrews (Prof) presented the keynote address, "Applications of Some Systems Engineering Concepts and Tools to Water Pollution Control Systems," at a Symposium on the Use of Mathematical Models in Water Pollution Control, University of Newcastle upon Tyne, England, Sept. 10-14. He also presented a paper entitled, "The Development of a Dynamic Model and Control Strategies for the Anaerobic Digestion Process." The Symposium was attended by engineers from 11 countries and the proceedings will be published as a book by the University Press.

### HISTORY DEPARTMENT

James E. Sargent (Asst Prof) has published "Oral History, Franklin D. Roosevelt, and the New Deal: Some Recollections of Adolf A. Berle, Jr., Lewis W. Douglas, and Raymond Moley," in The Oral History Review, I (Sept. 1973), 92-109.

### HOME ECONOMICS

Rose J. Davis (Asst Prof) attended and presented an invited speech entitled, "SPIN (Special Project in Nutrition) Program for Mental Health Patients" at the annual meeting of the Society for Nutrition Education held in Atlanta, Ga., Aug. 5-8.

### HORTICULTURE

T. L. Senn (Prof and Hd) was named a Fellow of the American Society for Horticultural Science at the recent annual meeting of the Society held in Raleigh, N. C. Dr. Senn was cited at the awards ceremony "for notable contributions to horticultural education, as an enthusiastic, inspirational teacher, and as a leader in the organization of the Collegiate Branches of the Society; for creative use of radio and television to bring horticulture to the service of the public; in recognition of outstanding service in public relations for the horticultural profession; and for active, effective leadership in Society affairs on the regional and national level."

R. A. Baumgardner (Assoc Prof), G. E. Stembridge (Prof), L. O. Van Blaricom (Prof), and C. E. Gambrell, Jr. (Asst Prof) have won the Carroll R. Miller Award of the American Society for Horticultural Science for the best paper dealing with improved marketing and utilization of peaches. The paper is entitled, "Effects of succinic acid-2,2-dimethylhydrazide on the color, firmness, and uniformity of processing peaches," published in the Journal of the American Society for Horticultural Science.

### RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) led a week end Orientation Workshop for Campcraft Instructors, Sept. 14-15 at Camp Pisgah near Brevard, N. C.



STANDING COMMITTEES OF THE UNIVERSITY 1973-74

1. Administration-Faculty-Student Council. The principal responsibility of this council is the consideration of areas of common concern and mutual interest to the student body, the faculty, and the administration for the benefit and improvement of the University community.

David L. Rowe (StuSen, Chairman)

J. B. McDevitt (V-Pres for Exec Affairs,  
ex officio)

E. H. McCarter (Bus & Fin) 1974

M. N. Lomax (Stu Affairs) 1974

George M. Moore (Development, Sec) 1974

John D. Fulton (Pres, Fac Sen) 1974

William E. West (V-Pres, Fac Sen) 1974

W. F. Steirer, Jr. (Chm Adm & Schol  
Comm of Fac Sen) 1974

William E. Findley (Stu Sen) 1974

Frank M. Young, Jr. (Stu Sen) 1974

2. Administrative Council. This council recommends business and non-academic personnel policy to the President.

Melford A. Wilson (Chairman)

R. C. Edwards (President)

Victor Hurst (V-Pres for Acad Affairs)

W. T. Cox (V-Pres for Stu Affairs)

J. B. McDevitt (V-Pres for Exec Affairs)

J. D. Fulton (Pres, Fac Sen)

E. H. McCarter (Financial Analyst)

M. E. Barnette (Budget Director)

T. N. Hinton (Dir of Accounting)

J. N. Wilson (Dir of Purchasing)

J. B. Gentry (Dir of Personnel)

Henry Hill (Dir of Auxiliary Ent)

Roy Rochester (Dir of Phys Plant)

Melvin E. Barnette (Budget Director)

3. Archives Committee. This committee advises on all policies concerning the University Archives.

R. S. Lambert (Chairman)

Martin Slann (Pol Sci) 1974

Richard Saunders (Hist) 1975

Harriet Holman (Engl) 1976

Sophia Sullivan (Fac Sen) 1974

J. W. G. Gourlay (Director of  
Library, ex officio)

Mary Anna McKeown (Undergrad Stu) 1974

4. Athletic Council. This council recommends all policy concerning inter-collegiate athletics to the Vice President for Student Affairs.

K. N. Vickery (Chairman)

J. V. Reel, Jr. (History) 1974

J. L. Young (Arch) 1974

J. V. Brawley, Jr. (Math) 1975

T. D. Efland (Text) 1975

W. J. Lanham (Ag Econ, Sec) 1976

R. W. Moorman (Engr Mech) 1976

J. D. Fulton (Pres, Fac Sen) 1976

Wm. E. Findley (Pres, Stu Sen) 1974

Lawrence V. Starkey (President  
of Alumni Association)

T. C. Breazeale, Jr. (Immediate  
Past Pres of Alumni Assn)

Lewis F. Holmes (Pres of IPTAY)

T. C. Atkinson, Jr. (Immediate  
Past President of IPTAY)

Robert J. Bosler (President of  
Block "C" Club)

STANDING COMMITTEES OF THE UNIVERSITY 1973-74

5. Audio-Visual Committee. This committee advises the Vice President for Development on the audio-visual needs and programs of the University.

Samuel Wang (Arch, Chairman)	1976
Joe F. Allen (Chem)	1974
W. F. Beckwith (Chem Engr)	1974
Revis M. Frye (RPA)	1974
J. C. Hubbard (Text)	1975
M. W. Jutras (Agron)	1975
Betty P. Watkins (Voc Educ)	1975
Edmond L. Wall (Lang)	1976
Opal Hipps (Nurs)	1976
Leroy Todd (Graduate Student)	1974
Anita L. Alston (Stu Sen)	1974
Harry Durham (Dir Communications Center, <u>ex officio</u> )	

6. Computer Advisory Committee. This committee advises the Dean of Graduate Studies & University Research on needs of the Computer Center.

Robert F. Zant (IM, Chairman)	1974
Gordon Howard (RPA)	1974
M. L. Wolla (E & CE)	1974
Ronald J. Knapp (Pol Sci & Soc)	1975
John C. Peck (Math)	1975
Mary Wagner (Nurs)	1975
John S. Lytle (AgEcon & RurSoc)	1976
Jack L. Clark (Arch)	1976
J. Page Crouch (Ind Educ)	1976
V. R. Harrell (Bus & Fin)	1975
J. L. Strom (Development)	1975
K. N. Vickery (Stu Affairs)	1975
Patrick Monaghan (Grad Stu)	1974
Sara E. Cromer (Undergrad Stu)	1974
M. C. Palmer (Computer Center, <u>ex officio</u> )	

7. Educational Council. This council recommends academic, research, and extension policy to the President.

Robert C. Edwards (Chairman)
Victor Hurst (Academic Affairs)
M. A. Wilson (Business & Finance)
W. T. Cox (Student Affairs)
J. B. McDevitt (Executive Affairs)
S. G. Nicholas (Development)
C. B. Green (Undergrad Studies)
A. E. Schwartz (Graduate Studies & University Research)
S. M. Willis (University Extension)
K. N. Vickery (Adm & Reg)
J. W. G. Gourlay (Library)
J. D. Fulton (Faculty Senate)
L. P. Anderson (Agri Sciences)
H. E. McClure (Architecture)
H. F. Landrith (Education)
L. C. Wilcox (Engineering)
W. H. D. McGregor (For & Rec Res)
W. D. Trevillian (IM & TS)
H. M. Cox (Liberal Arts)
G. Labecki (Nursing)
H. E. Vogel (Phys/Math/Biol Sciences)
Melvin C. Long (Director of Public Relations, <u>ex officio</u> )
E. N. Tyndall (Secretary)

STANDING COMMITTEES OF THE UNIVERSITY 1973-748. Ethics and Religion Committee.

This committee recommends policies to the President concerning the relationship between the student body and campus and community religious organizations.

C. E. Raynal (Chairman)

W. E. Copenhaver

T. C. Davis

Thomas Murphey

H. R. Reynolds

Luke B. Smith

W. T. Cox (V-Pres Stu Affairs)

Victor Hurst (V-Pres Acad Affairs)

B. E. Trent (Director of YMCA)

John Q. Hall, Jr. (Undergrad Stu)

Teresa G. Stallings (Undergrad Stu)

9. Extension Council. This council advises the Dean of University Extension on all policies and regulations pertaining to the total University extension program.

S. M. Willis (Chairman, ex officio)

George vonTungeln (Ag Econ) 1974

James R. Washburn (Arch) 1974

M. A. Packer (Educ Serv) 1974

N. R. Bauld (EM) 1975

George D. Kessler (For) 1975

F. T. Simon (Text) 1975

William C. Capel (PolSci & Soc) 1976

Suzanne Parks (Nurs) 1976

Eugene Park (Math) 1976

David Howe (Pres Ext Senate)

C. N. Nolan (Pres Ext Specialists' Association)

Lillian Goldberg, Pres Ext Home Economists' Assn)

B. F. Lawrimore (Pres Ext County Agents' Assn)

10. Faculty Research Committee.

This committee awards the funds allocated for faculty research to faculty members on the basis of proposals received from the faculty.

R. W. Henningson (Chairman)

C. C. Fain (Cr Engr) 1974

D. M. Hendricks (Food Sci) 1974

D. W. Lyons (Text) 1974

George Means (Arch) 1975

O. J. Jacobus (Chem & Geol) 1975

Lloyd H. Blanton (Ag Educ) 1975

Edwin M. Coulter (Pol Sci & Soc) 1976

Gwendolyn Lee (Nurs) 1976

R. W. McLellan (RPA) 1976

M. A. Wilson (Bus & Fin)

Gary S. Ragan (Stu Sen) 1974

Benjamin W. Mooring (Stu Sen) 1974

11. Fine Arts Series Committee. This committee plans, coordinates, and publicizes the annual program of University concerts, films, lectures, plays, and art exhibits.

J. H. Butler (Chairman)

B. D. Barnett (Poul Sci) 1974

James Dalton (Arch) 1974

M. C. Palmer (Math) 1974

W. B. Barlage (Chem E) 1975

J. C. Hubbard (Text) 1975

W. E. West (Ind Educ) 1975

Robert W. Hill (Engl) 1976

R. E. Shoenike (For) 1976

Mary Ann Kelly (Nurs) 1976

H. M. Cox (ex officio)

S. Linda Murtiashaw (Stu Sen) 1974

Kathy S. Henderson (Stu Sen) 1974

Anne M. Cooney (Stu Sen) 1974

STANDING COMMITTEES OF THE UNIVERSITY 1973-74

12. Graduate Council. All policies and regulations affecting graduate curricula and requirements leading to graduate credits, certification, and degrees shall be approved by this council and recommended to the Dean of the University.

A. E. Schwartz (Chairman, <u>ex officio</u> )	
N. D. Camper (Plant Path)	1974
C. R. Freeze (Elem & Sec Educ)	1974
G. C. Means (Arch)	1974
B. C. Dysart (ESE)	1975
H. H. Macaulay (Econ)	1975
L. W. Gahan (RPA)	1976
Jerome H. Mandel (Engl)	1976
Sidney A. Gauthreaux (Zool)	1976
James M. Kelley (Grad Stu)	1974
Preston Brown (Grad Stu)	1974

Graduate Council Alternates

John W. Huffman (Chem & Geol)	1974
John L. Idol (Engl)	1974
T. E. Wooten (For)	1974
Peter Lee (Arch)	1975
Jerry R. Lambert (Ag Engr)	1975
J. E. Matthews (Elem & Sec Educ)	1975
B. L. Edge (Civil Engr)	1976
Chester R. Smith (Ind Mgmt)	1976

13. Honors Program Council. This council recommends policy, including curricula and admission standards, concerning the Honors Program to the Dean of Undergraduate Studies.

Corinne Sawyer (Chairman)

P. B. Burt (Physics)	1974
J. D. Maxwell (Agron & Soils)	1974
Patricia Wannamaker (Lang)	1974
Arnold Phillips (Arch)	1975
W. C. Whitten (Econ)	1975
J. H. Adair (Elem & Sec Educ)	1975
Marvin W. Dixon (Mech Engr)	1976
Carolyn Kelley (Nurs)	1976
David H. Van Lear (Forestry)	1976
Ellen Jean Graef (HPC Student)	1974
Roger Alan Taylor (HPC Student)	1974
C. B. Green (Undergrad Studies)	
K. N. Vickery (Adm & Reg)	

14. Library Committee. This committee advises the Director of the Library on the determination of needs of library, the formation of library policies, and on such other matters as may be referred to it by the Director.

John R. Ray (Physics, Chairman)	1974
Elizabeth Galloway (Educ)	1974
D. B. Stafford (Civil Engr)	1974
Opal Higgs (Nurs)	1975
Ursula Holahan (Ext)	1975
Gordon E. Howard (RPA)	1975
Kenneth J. Russo (Arch)	1976
Furman R. Gray (Ind Mgmt)	1976
Hewitt D. Adams (History)	1976
Harriet G. Crim (Undergrad Stu)	1974
Anne L. Harshman (Grad Stu)	1974
J. W. G. Gourlay (Library, <u>ex officio</u> )	



STANDING COMMITTEES OF THE UNIVERSITY 1973-74

15. Patent Committee. This committee makes recommendations to the President concerning all University patent matters in accord with the Patent Policy as printed in the Faculty Manual.

Melford A. Wilson (Chairman)

974 W. W. Coffeen (Cr Engr) 1974  
 974 E. F. Coxie (ME) 1974  
 974 R. D. Hatcher (Chem & Geol) 1975  
 975 C. E. Hood (Ag Engr) 1976  
 975 E. B. Rogers (Ag Engr) 1976  
 975 James C. Dozier, Jr. (UG Stu) 1974  
 976 M. E. Barnette (Bus & Fin, ex officio)  
 976 T. D. Efland (Text, ex officio)  
 976 O. B. Garrison (Exp Sta, ex officio)  
 974 S. G. Nicholas (Dev, ex officio)

16. Planning Council. This council advises the Vice Pres for Development on plans and proposals pertaining to the development of programs for the enhancement of the academic & cultural life of the University community.

S. G. Nicholas (Chairman, ex officio)

D. W. Bradbury (Mech Engr) 1974  
 T. E. Wooten (For) 1974  
 J. A. Turner (Ind Mgmt) 1974  
 Corinne Sawyer (Engl) 1975  
 Aileen Prevost (Nurs) 1975  
 Averett S. Tombes (Zool) 1975  
 C. E. Hood (Ag Engr) 1976  
 Donald L. Collins (Arch) 1976  
 W. O. Corder (Elem & Sec Educ) 1976  
 E. H. McCarter (Bus & Fin) 1975  
 John D. Fulton (Fac Sen) 1974  
 John S. Pratt (Pres of Stu Body) 1974  
 Wm. E. Findley (Pres of Stu Sen) 1974

17. Poisonous Chemicals & Radioactive Materials Committee. This committee advises the President on policies concerning the use and disposal of poisonous chemicals and radioactive materials.

R. W. Henningson (Chairman)

Henry T. Polk (Chem & Geol) 1974  
 Donald E. Turk (Poul Sci) 1974  
 J. J. Porter (Tex Chem) 1975  
 J. W. Hall (Chem E) 1975  
 N. R. Page (Ag Chem Serv) 1976  
 O. J. Jacobus (Fac Sen) 1974  
 W. E. Berry (Univ Safety Coord)  
 Roy Rochester (Dir Phys Plant)  
 Donna Lee Rossman (Undergrad Stu) 1974  
 John H. Rodgers, Jr. (Grad Stu) 1974

18. Safety and Fire Prevention Committee. This committee advises the President through the University Safety Coordinator and other appropriate officials on safety policies and programs.

J. N. Beard (Chem E, Chairman) 1976  
 J. A. Gilreath (Physics) 1974  
 E. H. McCarter (Bus & Fin) 1974  
 J. A. Stanley (Phys Plant) 1974  
 J. R. Salley (Chem & Geol) 1975  
 W. E. West (Fac Sen) 1974  
 W. E. Berry (Univ Safety Coord)  
 J. B. McFadden (Athletic Dept)  
 J. E. Hair (Dir of Stu Health Serv)  
 J. M. Hanna (Phys Plant)  
 Philip R. Jackson (Undergrad Stu) 1974  
 J. Ronald Vinson (Graduate Stu) 1974

STANDING COMMITTEES OF THE UNIVERSITY 1973-74

19. Schedule Committee. This committee develops the master schedule of courses taught at the University.

K. N. Vickery (Chairman, ex officio)

A. R. Abernathy (ESE)

H. D. Adams (History)

Ralph P. Ashworth (Botany)

Walter L. Ball (E & CE)

L. H. Brown (Arch)

B. M. Cool (For & Rec)

J. H. Couch (Ind Engr)

C. C. Davis (Ind Mgmt)

Robert C. Grant (Aerospace Studies)

R. C. Harshman (Chem E)

J. Alex Hash (Ag Educ)

Louis Henry (Engl)

W. G. Hudson (ME)

John LaGrone (Math)

H. G. Lefort (Cr Engr)

W. R. Mattox (Admissions)

D. D. Moyle (Mat Engr)

J. C. McCormac (Civil Engr)

C. M. McGee (Engl)

C. M. McHugh (Engr Serv)

R. F. Nowack (Engr Mech)

Julia Higgins (Nurs)

E. B. Rogers (Ag Engr)

J. R. Salley (Chem)

J. H. Steed (Military Science)

R. C. Turner (Physics)

J. V. Walters (Text)

B. K. Webb (Agri Engr)

W. C. Whitten, Jr. (Econ)

Doreen Giger (Stu Sen)

Alan B. Laughlin (Stu Sen)

20. Scholarships & Awards Committee. This committee selects students for University scholarships and awards. It also has the responsibility for planning and coordinating the annual University Honors and Awards Day.

Corinne Sawyer (Chairman)

H. E. Morgan, Jr. (Ind Educ) 1974

W. C. Whitten, Jr. (Econ) 1974

Arnold L. Phillips (Arch) 1974

A. R. Recoulley (Engl) 1975

Claudia Hubbard (Nursing) 1975

P. Alston Steiner (Physics) 1975

S. S. Melsheimer (Chem E) 1976

T. V. Wilson (Ag Engr) 1976

J. L. Stevenson (RPA) 1976

K. N. Vickery (Adm & Reg)

G. E. Coakley (Assoc Dean of Students)

Susan Delony (Assoc Dean of Students)

A. M. Bloss (Dir Financial Aid)

Cuong Van Dinh (Phi Eta Sigma) 1974

John S. Pratt (Phi Kappa Phi) 1974

21. Traffic & Parking Committee. This committee advises the Vice President for Executive Affairs on all matters concerning traffic and parking.

E. H. McCarter (Chairman)

J. Edwin Clark (Civil Engr)

James W. Sutherland (Stu Aff)

Jack W. Weeden (Security)

J. L. Strom (Dir of Planning & Corporate Relations)

Robert Eflin (Campus Master Planner)

Robert W. Smith (Stu Aff)

B. K. Webb (Agri Engr) 1975

Slade F. Exley (Grad Stu) 1974

Stu Sen Designee (Traff & Grounds) 1974

R. L. Cross (Faculty Senate) 1974

J. B. McDevitt (Exec Aff, ex officio)

STANDING COMMITTEES OF THE UNIVERSITY 1973-74

22. Undergraduate Council. All policies and regulations affecting undergraduate curricula and requirements leading to undergraduate credits and degrees shall be approved by this council and recommended to the Dean of the University.

Undergraduate Council Alternates

C. B. Green (Chairman, ex officio)

Jerome V. Reel (Hist) 1974

Arline Duvall (Nurs) 1974

Malcolm J. Skove (Physics) 1974

L. W. Baxter (PlPath & Physiol) 1975

Lamar H. Brown (Arch) 1975

Carolyn Briscoe (Elem & Sec) 1975

R. W. Gilchrist (E & CE) 1976

B. M. Cool (Forestry) 1976

E. A. Vaughn (Text) 1976

Rodney M. Sprott (Stu Sen) 1974

David L. Rowe (Stu Sen) 1974

K. N. Vickery (Adm&Reg, ex officio)

C. C. Fain (Cr Engr) 1974

W. A. Shain (Forestry) 1974

R. F. Hebert (Econ) 1974

R. J. Calhoun (Engl) 1975

Gwendolyn Lee (Nurs) 1975

J. C. Fanning (Chem & Geol) 1975

Ralph K. DeHaven (Ag Econ) 1976

Peter Lee (Arch) 1976

John H. Rodgers (Ag Educ) 1976

CALENDAR OF CAMPUS EVENTS

- 2-6--Clemson Players Drama Troupe: "The Effect of Gamma Rays on Man-in-the-Moon Marigolds," Daniel Auditorium, 8 p.m.
- 3--Soccer: Furman, here, 3 p.m.
- 3-31--College of Architecture Exhibition: "Foundry Art," Lee Gallery
- 4--Clemson University Woman's Club: "The Governor's Lady" (Mrs. John C. West), Clemson House, 3:45 p.m.
- 4--University Union Concert: Lester Flatt and the Nashville Grass, Amphitheater, 9 p.m.
- 4-5--Annual Air & Water Pollution Control Seminar
- 4-6--University Union Movie: "What's Up, Doc?" Holtzendorff YMCA, 7:20 & 9 p.m.
- 6--Football: Texas A&M, here, 1:30 p.m.
- 6--Cross Country: Georgia Tech, here
- 8--German Film, Daniel Auditorium, 7 p.m.
- 8--Lecture: Prof. Eric Telcholz of the Graduate School of Design, Harvard Univ., on Computer Graphics and Spatial Analysis (evening feature), Lee Hall Gallery Auditorium
- 8-10--University Union Movie: "Kid Blue," Holtzendorff YMCA, 7:15 & 9 p.m.
- 8-12--Short Course for Refractory Manufacturers
- 9--Seminar: Dr. Robert Pierotti of Georgia Tech, "Interaction of Gases with Solids," Room 131 Brackett Hall, 4:45 p.m.
- 10--Fort Hill Quarterback Club Luncheon, Clemson House, 12 noon
- 10--Seminar: Dr. G.K. Patterson, Assoc. Prof. of chemical engineering at Univ. of Missouri-Rolla, on "Correlation of Drag Reduction with Measurable Variables," presented by the Chemical Engineering Colloquium Series, Earle Hall Auditorium, 4 p.m.
- 11--College of Liberal Arts Lecture Series, the Future of the American Presidency: Arizona Congressman Morris K. Udall on "A Democrat Looks at the Presidency," Daniel Auditorium, 3:30 p.m.



CALENDAR OF CAMPUS EVENTS Continued

11-13--University Union Movie: "Frenzy," Holtzendorff YMCA, 7 & 9 p.m.

11-13--International Students Association Bazaar, Holtzendorff YMCA

12--Soccer: Erskine, here, 3 p.m.

12--Tigerama, Stadium

13--Football: Virginia, here, 1:30 p.m. (Homecoming)

13--CDA Concert: The Doobie Brothers, Littlejohn Coliseum, 8 p.m.

15--Lecture by Thomas Cronin, Daniel Auditorium, 3:30 p.m.

15--Agronomy Conference: "Plant Food Distribution," P&AS Bldg., 9:05-11:15 a.m.

### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

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# NEWSLETTER

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13

No. 5

October 15, 1973

## Clemson Reading Conference To Be Held October 18-20

The Southeast's largest annual reading conference and one of the top three in the United States will be held at Clemson University Oct. 18-20.

"Reading: Skills and Attitudes" is the theme of the 1973 meeting, which will present an "A to Z" comprehensive view of reading problems and solutions that are applicable from first grade through college.

The conference, conducted by Clemson's College of Education, has drawn more than 600 educators from throughout the South-east during its first three years.

Some of the nation's top reading experts will give talks at the meeting, including Bill Martin Jr., author, teacher and one of the most creative educational innovators of modern times; William Purkey, clinical psychologist at the University of Florida renowned for his humanistic approach to education; Walter Barbe, editor of "Highlights for Children" and pioneer in individualized reading instruction; and Prof. Henry Bamman of Sacramento State College, considered one of the world's most outstanding developers of reading and instructional materials.

Some 20 major companies will also demonstrate the latest reading diagnosis and instructional materials during the three days.

"Reading achievement in most larger school systems throughout the country has been sinking to new lows each year," says conference director Prof. Gordon Gray. "Educators in most big cities and school districts have been unable to find ways to reverse this trend."

In Boston the head of the school board has proposed that the amount of time pupils spend on reading be doubled because reading scores have dropped to record lows, Gray says. In Milwaukee, for example, the average reading level at one all-black high school is not much above functional literacy, and in numerous large cities scores on nationally standardized reading tests have been going steadily downward, he says.

And the problem is not escaped in the Southeast and South Carolina. "Early uncorrected reading problems are probably the prime reason that over 52 per cent of the children who enter grade one in South Carolina fail to complete high school and might explain why over 700,000 adults and high schoolers in the state read below the eighth grade level," Gray says.

Reading problems can result from anything from inadequate early instruction to physical and emotional ailments. The Clemson Reading Conference will examine all of these areas.

"To solve reading problems what we need is a formalized approach to diagnose each student's weaknesses in specific reading skills and to provide individualized corrective measures," Gray says. The regional reading conference is one appropriate way to encourage educators to develop a comprehensive, concerted strategy for attacking reading problems in an all-out assault on what is the country's most serious educational ill, he says.

## Stewart L. Udall Will Speak at Clemson

Stewart Udall, former Secretary of the Interior under Presidents Kennedy and Johnson, will speak at Clemson Oct. 30. His lecture topic will be the "Energy-Environment Crisis."

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Udall's appearance at Clemson is sponsored by the Clemson University Speaker's Bureau and is an addition to the original schedule.

The lecture will be at 7 p.m. in Tillman Hall.

#### MINUTES OF THE MEETING OF THE ADMINISTRATION-FACULTY-STUDENT COUNCIL, SEPTEMBER 5, 1973

The duly appointed members of the Clemson University Administration-Faculty-Student Council met for organizational purposes, 4:00 o'clock, Wednesday afternoon, September 5, 1973 in the Board Room of Sikes Hall.

The following were present: Joseph B. McDevitt, William E. Findley, David L. Rowe, Francis M. Young, Jr., John D. Fulton, William E. West, W. F. Steirer, Jr., E. H. McCarter, M. N. Lomax and George Moore.

Admiral McDevitt, University Counsel and an ex-officio member of AFSC, presided as temporary chairman and called the meeting to order at 4:00 p.m. The first order of business was the election of a permanent chairman.

ACTION: Nomination of David Rowe as chairman of the Council was seconded and Mr. Rowe was elected by acclamation.

Mr. Rowe assumed the chair and called for nominations for secretary.

ACTION: (Motion by Dr. Steirer) George Moore was elected Secretary of the Council.

Acting in general consent, the Council set regular meetings for the first Tuesday of each month at 4:00 p.m. in Sikes Hall Board Room. (The next meeting thus to be October 2).

ACTION: (Motion by Dr. Steirer) Approved minutes of AFSC meetings are to be forwarded to Public Relations Office for use in University Newsletter. Copies of the minutes are to be distributed after each meeting to the members of the Council, the President of the University, the executive officers and to the Presidents of the Student and Faculty Senates.

ACTION: (Motion by Dr. Fulton) A quorum was defined, for the purposes of this Council, as five voting members including at least one from each of the areas that are represented on the Council.

The class attendance policy that was adopted by AFSC last spring was discussed in the context that the "spirit and intent of the policy" is apparently not clear. The chairman asked Council members to study the current phrasing of the policy with a view toward clarifying and strengthening it while retaining its original intent.

Dr. Fulton summarized the actions of the Faculty Senate during the summer for the benefit of Council members who were not on campus. He pointed out that summaries of the minutes of the meetings will be published in the Newsletter, and complete texts of minutes will be available in the SC Room of the Cooper Library for those who might wish to refer to them.

The call to adjourn came at 5:05 p.m.



MINUTES OF MEETING OF THE UNDERGRADUATE COUNCIL, SEPTEMBER 7, 1973

The Undergraduate Council held its first meeting for the 1973-74 academic year in the Conference Room, E-103A Martin Hall. The following were present: Dean Claud B. Green (Chairman), Carolyn Briscoe, Lamar H. Brown, N. Dwight Camper (Visitor), Bingham M. Cool, Ralph K. DeHaven, Arline M. Duvall, Ralph W. Gilchrist, Jerome V. Reel, David L. Rowe (Student Representative), Claude S. Simpson (Visitor), Malcolm J. Skove, Rodney M. Sprott (Student Representative), Edward A. Vaughn, and Kenneth N. Vickery.

The minutes of the May 24, 1973, meeting were approved as distributed.

Dr. Briscoe was elected to serve as secretary for the Council for 1973-74.

College of Agricultural Sciences

A request for approval of a B.S. Major in Community and Rural Development was presented by Dr. DeHaven. There was a motion and second to accept the proposal; the motion was approved.

A copy of the proposed curriculum is attached.

The following new courses and course changes were approved:

Agric	302	Organic Farming and Gardening, 2 cr (2 and 0).
An Ph	301	Physiology and Anatomy of Domestic Animals, 3 cr (2 and 3).
CRD	357	Natural Resource Economics, 3 cr (3 and 0).
CRD	411	Investment in Human and Natural Resources, 3 cr (3 and 0). Approved on condition that Econ 201 and Ag Econ 202 be listed as prerequisites.
CRD	412	Regional Economic Development Policy, 3 cr (3 and 0). Approved on condition that Econ 201 and Ag Econ 202 be listed as prerequisites.
Ent	461	Special Problems in Entomology and Economic Zoology, 1-3 cr. Revision of existing course.
Hort	413	Advanced Turfgrass Culture, 3 cr (3 and 0).
Hort	414	Retail Flower Business, 1 cr (1 and 0). Replaces part of Hort 408.
Hort	416	Floral Design, 1 cr (0 and 3). Replaces part of Hort 408.
Hort	461	Problems in Landscape Design, 3 cr (2 and 3). Replaces part of Hort 460.
Hort	462	Landscape Design Implementation, 3 cr (2 and 3). Replaces part of Hort 460.

The following course was tabled:

Gen	401	Genetics and Human Affairs, 3 cr (3 and 0).
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MINUTES OF UNDERGRADUATE COUNCIL MEETING, SEPTEMBER 7, 1973 (Continued)

College of Architecture

The proposed curriculum for the degree of Bachelor of Architecture was approved. A copy of the curriculum is attached.

The following new courses and course changes were approved:

- |       |     |  |
|-------|-----|--|
| Arch  | 553 | Architectural Design VII, 9 cr (3 and 18).<br>Replaces Arch 591, 11 cr (5 and 18).   |
| Arch  | 554 | Architectural Design VIII, 9 cr (3 and 18).<br>Replaces Arch 451, 8 cr (2 and 18).   |
| Arch  | 559 | Terminal Project in Architecture, 9 cr (1 and 24).<br>Replaces Arch 592, 11 cr (5 and 18).   |
| Bl Sc | 432 | Construction Equipment and Formwork, 3 cr (3 and 0).<br>Replaces Ar Co 432, 2 cr (2 and 0) and Bl Sc 432,<br>2 cr (2 and 0). List Bl Sc 202 as prerequisite. |
| Bl Sc | 475 | Building Equipment and Systems, 3 cr (3 and 0).<br>Replaces Arch 475, 3 cr (3 and 0).  |
| Bl Sc | 476 | Building Equipment and Systems, 3 cr (3 and 0).<br>Replaces Arch 476, 3 cr (3 and 0).  |

College of Education

Lt. Col. C. S. Simpson, Jr., explained a cross-enrollment agreement between Clemson University and other area institutions permitting the Army ROTC Detachment at Clemson to expand its program. Cross-enrollment agreements have been signed with Anderson College, Central Wesleyan College, and Tri-County TEC.

This program was endorsed by the council.

College of Engineering

Approval was given for the following new course:

- |      |     |   |
|------|-----|---|
| E&CE | 469 | Computer Applications for Nonengineers, 2 cr (2 and 0). |
|------|-----|---|

College of Liberal Arts

Approval was given for the following new courses:

- |        |     |   |
|--------|-----|---|
| Engl   | 448 | American Humor, 3 cr (3 and 0). List as prerequisite:<br>Junior standing.   |
| Pol Sc | 474 | Comparative Asian Governments, 3 cr (3 and 0).  |
| Pol Sc | 475 | Political Systems of Latin America, 3 cr (3 and 0).<br>List as prerequisite: Pol Sc 101, 201, or permission of<br>instructor. |

MINUTES OF UNDERGRADUATE COUNCIL MEETING, SEPTEMBER 7, 1973 (Continued)

- Pol Sc 476 Political Systems of the Middle East, 3 cr (3 and 0).  
List as prerequisite: Pol Sc 101, 201 or permission of instructor.
- Psych 485 Experimental Social Psychology, 3 cr (3 and 0).  
Psych 487 Practicum in Applied Psychology, 3 cr (1 and 4).  
Soc 490 Penology and Corrections, 3 cr (3 and 0). Approved subject to listing of prerequisites.

College of Nursing

Approval was given for the following change in the baccalaureate program: In the second semester, Senior year delete Nurs 415, Nursing as a Social Force, 3 cr (3 and 0); add Elective, 3 cr (3 and 0). This elective is to be selected from those numbered 201 or above.

College of Physical, Mathematical, and Biological Sciences

The following new courses were approved:

- Bot 411 Introductory Mycology, 3 cr (2 and 3).  
Replaces Bot 451.
- Ch 436 Spectroscopy Laboratory, 2 cr (0 and 6).  
Replaces Ch 428.
- Geol 411 Research Problems, 1-3 cr (0 and 3-9).  
Phys 247 Science and Society, 2 cr (2 and 0).

GRADUATE COUNCIL MINUTES, AUGUST 9, 1973

Dean Schwartz called the Graduate Council meeting to order. Those present were: Dr. Brown, Dr. Gahan, Dr. Mandel, Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart and Professor Byrns (alternate for Dr. Macaula

The minutes of the July 17, 1973 meeting were approved as distributed.

Candidates for masters and Ph.D. degrees for August 11, 1973 graduation were approved.

Dr. Brown distributed reports and discussed the implementation of the "I" policy.

Dr. Brown distributed and discussed corrections for the new graduate catalog and indicated that errata sheets had been sent to all departments.

The Council reviewed the proposal for a new course, GS 799, Comprehensive Studies, and concurred with the description and intent of the course. A motion was made, seconded, and passed to approve GS 799.

Dean Schwartz distributed information about the newly organized Graduate Student Association and reported that the group had recently held a meeting.

It was announced that the next meeting would be held Friday, September 14, 1973. A motion was made, seconded and passed to adjourn.

SOUTH CAROLINA REVIEW

The College of Liberal Arts and the Department of English at Clemson University have taken over publication of The South Carolina Review from Furman University beginning with volume six, no. one, to be published this November. Richard J. Calhoun (Alumni Prof) and Robert W. Hill (Asst Prof) are the editors, and William Koon (Asst Prof) is the managing editor. The Review makes an appeal to literary scholars and to readers in general by publishing critical and scholarly articles, short fiction, poetry, and book reviews. It appears twice each year, in November and April, and has an international circulation. Subscriptions are \$2.00 a year, \$3.50 for two years. They should be addressed to The South Carolina Review, Department of English.



CHEMISTRY AND GEOLOGY

The Clemson Student Affiliate Chapter of the American Chemical Society has been commended for excellence in the 1972-1973 academic year by the ACS Committee on Chemical Education. The award recognizes outstanding contributions in developing attitudes of professionalism among chemistry students. The present award is especially noteworthy since only 31 of 579 chapters were recognized as outstanding and the Clemson Chapter received the award for the second consecutive year. C. B. Bishop (Assoc Prof) is the Chapter faculty advisor.

CIVIL ENGINEERING

S. C. Anand (Assoc Prof) will present a paper at the 10th anniversary meeting of the Society of Engineering Science at North Carolina State University in Nov. "Tresca Yield Condition and Plane Fracture Mechanics by Finite Element Method" will also be published in the Society's proceedings.

S. C. Anand's paper, "Inelastic Buckling of Rings with Residual Stresses," will be published in the October issue of the Journal of the Engineering Mechanics Division of the American Society of Civil Engineers.

CONTINUING ENGINEERING EDUCATION

The Piedmont Chapter of the South Carolina Society of Professional Engineers and the College of Engineering are co-sponsoring a series of review classes to assist engineers in preparing for the Engineering in Training examination. Classes are meeting 3 evenings a week from Sept. 10 - Nov. 3 at Greenville TEC. Conducting the review sessions are Eugene Park (Assoc Prof, Math Sci), C. W. Ulbrich (Assoc Prof, Physics), E. S. Iracki (Asst Prof, ESE), Walter L. Ball (Assoc Prof, E&CE), W. G. Hudson (Assoc Prof, Mech Eng), C. R. Mitchell (Asst Prof, Eng Mech), M. K. Richardson (Assoc Prof, Eng Mech), J. G. Goree (Assoc Prof, Eng Mech), W. E. Castro (Prof, Eng Mech), and William Baron (Assoc Prof, CE).

F. W. Cooke (Assoc Prof, Mat Eng and Hd, DIS) is teaching a short course for orthopedic surgeons at the University of Georgia Medical College in Augusta, Ga. Topic of the five-session short course, meeting Sept. 11 - Oct. 12 is the mechanical function and design of orthopedic devices and the mechanical consequences of orthopedic surgical procedures.

Clemson University is sponsoring a plant operators' forum on the practice of thermal energy management with North Carolina State University and regional brick and tile manufacturing associations, Oct. 22-24. G. C. Robinson (Prof and Hd, Cer Eng), "An Easy Method of Calculating Kiln Losses," and Baxter Scott (Grad Stu, Cer Eng), "Saving Gas by Adding Coal to Raw Material."

### COLLEGE OF INDUSTRIAL MANAGEMENT AND TEXTILE SCIENCE

H. Betts Wilson, Field Representative, is coordinating the program for the High School Science Seminar which will be held at the Holiday Inn in Greenwood on Oct. 24. This seminar is co-sponsored by the College of Industrial Management and Textile Science and the South Carolina Textile Manufacturers Association. C. H. Whitehurst, Head of the Dept. of Industrial Management, E. I. Stearns, Head of the Dept. of Textiles, and Bruce Yandle, Head of the Dept. of Economics will be the speakers. Guests will be members of the Management Team from Greenwood Mills and High School teachers from Greenwood, Abbeville, Ware Shoals, Due West, Honea Path, Belton, Laurens, and Ninety Six.

Robert B. Lincks, Asst. Personnel Director of Burlington Industries, Inc., Greensboro, N. C. was accompanied by a group of four Burlington representatives (William L. Johnson, Corporate Group Vice President; Ted Hammett, Plant Manager - Rocky Mount Finishing Plant of Klopman Mills Division; Lewis Thompson, Vice President - Manufacturing Operations, Burlington Madison Co., Marvin Pinson, Vice President Product Development - Burlington Worsteds Division) on a visit to Clemson University, Oct. 9. Burlington Industries was host to a get-acquainted dinner which was held at the Clemson House. Mr. Lincks established this concept some years ago and it is another Burlington Program to enhance the two-way street between academicians and industry's personnel. Dean W. D. Trevillian, C. H. Whitehurst, E. I. Stearns, Bruce Yandle, Ralph D. Elliott, Chester Smith, Ralph Byrns, and Betts Wilson represented the College of IM & TS at the meeting.

### COLLEGE OF NURSING

Geraldine Labecki (Dean) participated as a member in a meeting of the Southern Regional Education Boards' Long Range Planning Committee in Atlanta, Ga. on Sept. 28.

### DAIRY SCIENCE

J. T. Lazar, Jr. (Prof) attended and participated in a "Food Engineering Education Conference" held at the University of Illinois, Sept. 4-6.

### ENGLISH

C.L. Montgomery (Instr in Speech) has contributed a chapter to the 1973 edition of Springboards, the nationally distributed debate handbook for high schools.

ENGLISH (Continued)

Robert W. Hill (Asst Prof) co-directed a poetry workshop and read some of his poems at The Pegasus Society Poetry Festival at Anderson College, Sept. 14.

Corinne Sawyer (Assoc Prof) and Teryle Carpenter (Instr in Education) had an article, "The Effect of a College Reading Program Upon the Reading Gains, Grade Point Ratio and Attrition Rate for High-Risk Freshmen, Part I, Reading Gains," published by the Educational Resources Information Center.

Robert Barton (Asst Prof of Speech) has just completed his third season employed as a professional actor with the Colorado Shakespeare Festival. This summer he portrayed the Duke in Measure for Measure, The Player in Hamlet, Pericles, and Orsino in a forthcoming national CBS-TV production of Twelfth Night.

ECONOMICS

Robert F. Hebert (Asst Prof) had accepted for publication an article entitled, "Wage Cobwebs and Cobweb-Type Phenomena: An early French Formulation," in the Western Economic Journal.

Paul Zipin (Asst Prof) has completed a monograph entitled, "The Feasibility of Hiring the Hard Core Unemployed in the Textile Industry." The project was funded by the Sirrine Foundation.

B. R. Skelton (Prof) presented seminars to local elected government officials on the subject, "The Role of the Local Elected Official in Stimulating and Promoting Future Economic Growth." These seminars were part of an Appalachian Leadership Development Conference sponsored by the South Carolina Appalachian Council of Governments and the Appalachian Regional Commission. Seminars were held on Sept. 15 at Greenville TEC, on Sept. 20 at Spartanburg TEC, and on Sept. 27 at Tri-County TEC.

ENTOMOLOGY AND ECONOMIC ZOOLOGY

Jay D. Hair (Asst Prof) presented a paper at the International Conference on the Hymenolepididae (invited by the Polish Academy of Science) in Warsaw, Poland on Sept. 15. He also participated in the Congress for World Advancement of Veterinary Parasitology - Parasitic Zoonoses Symposium in Vienna, Austria, Sept. 18-20.

T. R. Adkins, Jr. (Prof) went to College Park, Md., Sept. 16-19 to attend the meeting of the Professional Training, Standards and Status Committee of the Entomological Society of America. Dr. Adkins is Chairman of this committee.

## ENVIRONMENTAL SYSTEMS ENGINEERING

J. B. Busby (PhD Candidate) and J. F. Andrews (Prof) presented a paper entitled, "Dynamic Modeling and Control Strategies for the Activated Sludge Process" at the 46th annual conference of the Water Pollution Control Federation, Cleveland, Ohio, on Oct. 2.

J. F. Andrews presided at a research symposium held at the 46th annual conference of the Water Pollution Control Federation, Cleveland, Ohio, Oct. 2. He also serves on the Federation program committee.

J. F. Andrews served as program chairman for an international conference on "Instrumentation, Control and Automation of Wastewater Treatment Systems," in London and Paris, Sept. 17-21. He chaired a session on computer control of wastewater treatment plants, presented a paper, "Development of Control Strategies for Wastewater Treatment Plants," and was co-author for two other papers. Dr. Andrews also visited colleagues at the National Water Pollution Laboratory in Stevenage, England and the Institut National de Recherche Chimique Appliquee in Paris.

E. S. Iracki (Asst Prof) has received a gift of two pyrographic analyzers, valued at \$85,000 from the Environmental Protection Agency. The instruments developed by Rocketdyne Corporation will be used to study and develop computer-assisted automated systems for the rapid detection and characterization of water pollution and the identification of pollution sources.

## FOOD SCIENCE

Donald M. Henricks (Assoc Prof) presented a paper at the American Society of Animal Science meeting in Lincoln, Neb. on Aug. 1 entitled "Gonadal Hormones in Heifers Treated with Prostaglandin F and Pregnant Mare's Serum." The paper was co-authored by J. F. Dickey (Assoc Prof, Dairy Sci) and J. R. Hill (Prof, An Sci).

Donald M. Henricks presented a paper at the Society for the Study of Reproduction in Athens, Ga. on Aug. 15 entitled "Endocrine Status and Embryonic Mortality in Protein-Deprived Rats." The paper was co-authored by Lynn Bailey (former Grad Stu).

Donald M. Henricks has been elected a member of the American Physiological Society. The Society is open to scientists with active and continuing research in the area of physiology. His research deals with the hormones that regulate reproduction in domestic animals.



## FERTILIZER INSPECTION AND ANALYSIS

H. V. Rogers (Hd) attended the annual meeting of the Association of American Plant Food Control Officials in Fort Lauderdale, Fla. in August and presented an invited paper, "Are Fertilizer Laws and Regulations Compatible with the Movement of Fertilizer from Plant to Farm?" He also appeared on a panel which discussed "Labeling and Registration Problems."

## FORESTRY

C. L. Lane (Assoc Prof) attended the Fourth International Conference on Fomes annosus at the University of Georgia, Sept. 16-22. He presented a paper, co-authored by W. Witcher (Prof, Plant Path and Physiol) entitled, "Studies on Fomes annosus and the infection of pine seedlings."

J. R. Warner (Prof) attended the National Convention of the Society of American Foresters, Portland, Oregon, Sept. 23-27. The convention theme: "Today's Forester in Land Use Planning."

Donal Hook (Dir, Belle W. Baruch Research Institute) participated in a regional Task Force planning meeting at Atlanta, Ga. on Sept. 10-11. The purpose of the Task Force is to identify the research needs in the fields of forest watersheds, soils, and pollution for the Southern Region and to estimate the amount of effort needed to solve the problem or take advantage of the opportunities for better resource management. The second and final meeting of the Task Force on Forest Watersheds, Soils and Pollution will be held at Hobcaw Barony in Jan., 1974.

## HISTORY

John Y. LeBourgeois (Asst Prof) has published "Swinburne and Mazzini: the Origin of Swinburne's Imperialism?" in the Victorians Institute Journal, July 1973.

## INDUSTRIAL MANAGEMENT

C. H. Whitehurst (Prof and Hd) addressed the Sand Hills Chapter of the American Institute of Industrial Engineers in Columbia on Sept. 11. His topic was "The Testimony of the Engineer-Scientist in an Adversary Proceeding: Further Consideration of the Issues."

### INDUSTRIAL MANAGEMENT (Continued)

James A. Turner, Jr. (Assoc Prof) participated as a panelist-attorney on "The Home Buyers Forum" co-sponsored by the Tri-County Technical Education Center and the Mortgage Investors Insurance Corporation on Sept. 10 in Pendleton.

Earl E. Burch (Asst Prof) will serve as Program Chairman and Proceedings Editor for the 1973 Southeastern Regional Meeting of the Institute of Management Sciences to be held in Atlanta, Ga., Oct. 17-19.

### PHYSICS AND ASTRONOMY

Beverly B. Bookmyer (Assoc Prof) has been nominated as a member of the Electorate Nominating Committee of the American Association for the Advancement of Science for a term of two years.

Burt V. Bronk (Assoc Prof) gave a talk on "Thermally Enhanced Radiation Effects on Mammalian Cells" at Roswell Park Memorial Cancer Institute, Buffalo, N.Y. in Aug. and was a guest in Dr. Charles Helmstetters laboratory for a week at that time.

P. B. Burt (Prof) and J. L. Reid (Grad Stu) have published a paper entitled, "Quantum Field Theory of Self-Interacting Systems," in Journal of Physics A, Vol. 6, pp. 1388-1396, September 1973.

Burt V. Bronk (Assoc Prof) gave a talk in the Biophysics Dept. at the University of Kentucky at Lexington.

### PLANT PATHOLOGY AND PHYSIOLOGY

The following staff members attended and participated in the annual meetings of the American Phytopathological Society and the Second International Congress of Plant Pathology at Minneapolis, Minn., Sept. 5-12.

O. W. Barnett (Asst Prof) presented a paper entitled, "White clover viruses in the southern USA." He is a member of the APS Virology Committee.

L. W. Baxter (Prof) is serving as chairman of the APS Membership Committee and represented Clemson University at the plant pathology department heads' meeting.

PLANT PATHOLOGY AND PHYSIOLOGY (Continued)

W. M. Dowler (Lect) presented a paper, co-authored by D. J. Weaver (USDA, Byron, Ga.) and entitled "Virulence of Pseudomonas syringae in fall-pruned peach trees in the southeastern United States."

E. I. Zehr (Asst Prof) is serving as chairman of the APS committee on New Fungicide and Nematicide Data and is a member of the Pesticide Nomenclature Committee, the Publications Committee, and Chemical Control Committee.

POLITICAL SCIENCE AND SOCIOLOGY

W. C. Capel (Assoc Prof) has published, with W. A. Bloom, MD, Tulane, "An Exploratory Study of the relation of heroin addiction to crime in New Orleans," in Proceedings, National Conference on Methadone Treatment, National Drug Abuse Council, Washington.

M. W. Slann (Asst Prof) delivered "Maki and Rakah: The Ethnic and Ideological Bifurcation of the Israel Communist Party" at the 1973 annual meeting of the American Political Science Association in New Orleans, La., Sept. 4-8.

POULTRY SCIENCE

W. T. Derieux (Vet II) presented a paper, "New Developments in Fowl Cholera Immunization" on Sept. 17 at the Dixie Poultry Exposition in Asheville, N. C.

K. A. Holleman (Assoc Prof) served as general chairman of the Dixie Poultry Exposition Sept. 16-18 and chaired the Sept. 17 educational section and served as Toastmaster at the banquet Sept. 18.

PSYCHOLOGY

David J. Senn (Assoc Prof) has published an article, "Institutional Racism and the American Psychological Association," in the Journal of Social Issues, 1973, 29, 67-79. The article appeared in an issue of the journal focusing on the "White Researcher in Black Society."

RECREATION AND PARK ADMINISTRATION

Gordon E. Howard (Assoc Prof) was elected second vice chairman of the Leisure Resources Committee of the Appalachian Regional Council of Governments at its Sept. meeting.

RECREATION AND PARK ADMINISTRATION (Continued)

Jack Stevenson (Assoc Prof) representing the National Board of Directors led presentation of the American Camping Association Task Force on "Revised Financial Procedures" to the Southeastern Section, ACA Board of Directors on Sept. 28-30. The annual fall meeting was held at Camp Barney Mednitz near Cleveland, Ga.

TEXTILE DEPARTMENT

E. I. Stearns (Prof and Hd) presented a paper, "The Textile Department at Clemson University" to the National Technical Conference of the American Association of Textile Chemists and Colorists on Sept. 20 in Atlantic City, N. J.

ZOOLOGY

Averett S. Tombes (Assoc Prof) participated in a Gordon Research Conference on Hormone Action at the Kimball Union Academy, Meriden, N. H., Aug. 13-17.



OCTOBER  
CALENDAR OF CAMPUS EVENTS

- 15--College of Liberal Arts Lecture Series, the Future of the American Presidency: Thomas E. Cronin, visiting professor at the Center for the Study of Democratic Institutions, on "Beyond the Textbook Presidency," Daniel Auditorium, 3:30 p.m.
- 15--Agronomy Conference: "Plant Food Distribution," P&AS Bldg., 9:05-11:15 a.m.
- 16--Department of History and Visual Studies Studio Discussion and Evening Lecture: Professor A. Graham Collier, Dept. of Art, University of Georgia, author of Form Space and Vision and Art and the Creative Consciousness, speaking on his latest book, Lee Hall Gallery Auditorium
- 17--Fort Hill Quarterback Club Luncheon, Clemson House, 12 noon
- 17--Clemson University Concert Series: "Godspell," performed by a professional touring company, one of the most vital, youthful stage productions of recent years, based on the Gospel According to St. Matthew, Littlejohn Coliseum, 8 p.m.
- 18-20--Clemson University Reading Conference
- 19--JV Football: South Carolina, here, 2 p.m.
- 21--Soccer: Appalachian State, here, 2 p.m.
- 22--Agronomy Conference: "Production, Marketing and Use of Solid Solution and Suspension Multi-Nutrient Fertilizers I," A-203 P&AS Bldg., 9:05-11:15 a.m.
- 22--Graduate Studio Discussion and Evening Lecture: Mr. Malcolm Jones, RIBA, Deputy Regional Director, Oxford Regional Hospital Board, speaking on British "systems building," Lee Hall Gallery Auditorium
- 22--Clemson University Concert Series: "Belgrade Chamber Orchestra conducted by Antonio Janigro," sixteen of Yugoslavia's greatest string players under the baton of one of the world's leading cellist-conductors. The program includes music of Mozart, Tchaikovsky, Handel and Hindemith, and features Janigro as soloist. Littlejohn Coliseum, 8 p.m.
- 22-24--Plant Operators Forum on The Practice of Therman Energy Management, Clemson House
- 22--Gamma Sigma Delta meeting, P&AS Aud., 12 noon, Coach Tates Locke speaker
- 23--Spanish Play
- 23--Seminar: Dr. M.L. Caspar of East Carolina University on "Stereochemistry of Complex Metal Hydride Reduction of Ketones," presented by the Department of Chemistry and Geology, Room 131, Brackett Hall.
- 24--Fort Hill Quarterback Club Luncheon, Clemson House, 12 noon
- 24--Agronomy Conference: "Production, Marketing and Use of Solid Solution and Suspension Multi-Nutrient Fertilizers II," A-203 P&AS Bldg., 9:05-11:15 a.m.
- 24--Clemson University Concert Series: Dallas Symphony Orchestra, Littlejohn Coliseum, 8 p.m.

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CALENDAR OF CAMPUS EVENTS Continued

- 25--College of Liberal Arts Lecture Series, the Future of the American Presidency:  
Duke Univ. Prof. James D. Barber on "Predicting Presidential Character," Daniel  
Auditorium, 3:30 p.m.
- 26--Soccer: Georgia State, here, 3 p.m.
- 27--Graduate Record Examination, Graduate School Foreign Language Test
- 27--Football: N.C. State, here, 3 p.m.
- 28--University Union Fine Arts Film: "Golden Age of Comedy," Holtzendorff YMCA, 8 p.m.
- 30--Speakers Bureau: "The Energy Crisis," presented by Stewart Udall, Board Chairman  
of Overview, an environment counseling firm, Tillman Auditorium, 7 p.m.
- 31--Soccer: Duke, here 3 p.m.

**PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

[v.13 no.6]

November 1, 1973

## Bostic Named Assistant Secretary of Agriculture

Mr. James E. Bostic Jr., 26-year-old South Carolina native who won a prestigious White House Fellowship while a graduate student at Clemson University last year, has been appointed Deputy Assistant Secretary of Agriculture for Rural Development.

The announcement was made Friday (Oct. 5) by Secretary of Agriculture Earl L. Butz.

Bostic, whose hometown is Bennettsville, has served in the post as acting deputy since May. He first went to Washington in the fall of 1972 as one of only 17 young men selected from applicants nationwide for the 1972-73 White House Fellowships.

Bostic was the youngest member of the elite group and only the second South Carolinian to receive a White House Fellowship since the program was created in 1964. He was assigned to the Department of Agriculture and served as a special assistant to Secretary Butz until he became acting deputy.

In his new position as Deputy to Assistant Secretary Will Erwin, Bostic will carry administrative responsibilities involving Farmers' Home Administration, Rural Development Service, and the Rural Electrification Administration.

## English Department Will Sponsor Symposium on Children's Literature

The Department of English is sponsoring its second Symposium on Children's Literature November 10 in Daniel Hall Auditorium, from 9:00 to 2:00. The Symposium coincides with National Children's Book Week, November 12-18; and though the program is planned for elementary and middle

school teachers, librarians and principals, the public is invited.

Speakers and their topics are Dr. Elizabeth Galloway, Department of Education, "The Role of Children's Literature in the Teaching of Reading"; Pat Day, second grade teacher at Overbrook-Eastover Elementary in Greenville, moderating a panel of teachers and librarians on the methods they use to stimulate students to read children's books; Dr. Bernice Cooper, Professor of Children's Literature at the University of Georgia, "Illustrations in Children's Books"; and Mr. Robert Burch of Fayetteville, Georgia, "How Realistic Should a Children's Story Be?"

## Roberts Appointed Internal Auditor

Mr. James T. Roberts has been assigned to the staff of the Business and Finance Office as Internal Auditor. His duties will include periodic surprise cash counts, checking bank reconciliations, review of accounting operations and procedures, test checks of receipts and expenditures, and other procedures necessary for proper internal controls. Reports will be made periodically of the findings and recommendations to the Vice President for Business and Finance. The Internal Auditor will be responsible for reviewing the operations of all departments and for providing assistance and guidance as needed.

## Roger Miller Added To Speaker's Bureau Schedule

Roger Miller, ultra-conservative twenty-nine year old millionaire professor of economics, will talk about "The Economics of Public Issues" here November 13. He is sponsored by the Clemson University Speaker's Bureau and is an addition to their previously announced schedule. Miller's address will be made at 7 p.m. in Tillman Auditorium.



## Instruction Is Emphasis for Clemson's Educational Radio Productions

With emphasis on instruction, the Clemson University Communications Center has begun its second year as a satellite production studio for the South Carolina Educational Radio Network.

The bulk of programming for S.C. ERN stations (WEPR, 90.1 FM, Greenville, and WSCI, 89.3 FM, Charleston -- and coming soon, a midlands station in Sumter) originates from Network headquarters in Columbia. At certain times of the day and night, however, Clemson University "switches in" to the Network with programming produced and "fed" from new, fully stereo studios in the Clemson House.

Four new instructional programs join the line-up of Clemson resources this year.

"S-C-I-E-N-C-E" is a weekly instructional radio series reflecting various disciplines of the Clemson University College of Agricultural Sciences, broadcast Tuesdays at 11:30 a.m. and repeated Thursdays at 11:30 a.m.

PHYSICAL SCIENCE IN THE REAL WORLD is broadcast Tuesdays and Thursdays at 11:45 a.m. This instructional radio series is a joint effort of faculty members from the Departments of Physics, Textile Science and Chemistry.

Designed for grades 11 and 12, these presentations relate basic scientific knowledge to "real world" research, advancements and careers.

POLITICAL ISSUES airs on Saturdays at 6:30 p.m. and repeats Tuesdays at 9:15 a.m. A second presentation airs Thursdays at 9:15 a.m. Dr. Ed Coulter of the Political Science Department is host and coordinator. The POLITICAL ISSUES series focuses on various aspects of American government and current events. Programs include generic presentations prepared by faculty members of the political science department and interviews with lecturers from the Robert A. Taft Institute on Government, the Future of the American Presidency, and governors of South Carolina.

SHAKESPEARE SCENE-BY-SCENE is a presentation of plays, courtesy Caedmon Records, performed by the Royal Shakespeare Recording Society. Dr. Ray Barfield of the Clemson University English faculty provides between-scene commentary and explanations. SHAKESPEARE SCENE-BY-SCENE airs Sundays at 9:30 p.m. and Mondays at 11:00 a.m.

Clemson University enrichment programming includes:

- POETRY TODAY, Thursdays at 12:00 noon and 7:45 p.m. Host and creator is Dr. Robert W. Hill of the Clemson University English faculty.
- ENVIRONMENT '73, Wednesdays at noon and 7:45 p.m. with host Bo Bierley.
- MUSIC FROM THE MOUNTAINS, Tuesdays at noon and 7:45 p.m. Host and creator of this performance-cum-discussion of Appalachian music is Edith Card of the Clemson University Music faculty (currently on leave for further graduate work at Florida State).
- FOOD FOR THOUGHT, Fridays at noon and 7:45 p.m. Providing information on nutrition and health is Marie Hindman, associate professor of home economics in nutrition.

In addition, the Communication Center produces CAROLINA WEATHERVANE, in cooperation with the Extension Service, the South Carolina Experiment Station and the National Weather Service Office, airing Monday through Friday at 12:15 p.m.

Entertainment programs produced by Clemson University include:

- FILM FIFTEEN, Mondays at 12:00 and 7:45 p.m. (repeated Saturdays, 6:45 p.m.). Movie reviews and film commentary are provided by Ross Cornwell of the Public Relations Department and Bob Austin of the Communications Center.
- MAJORS AND MINORS, Fridays at 2:00 p.m. is a music program hosted by Dr. Ray Barfield.
- THE TIME HAS COME, Fridays at 12:30, is a flexible magazine of the air.

Many other individuals and departments on campus are currently working up programs and series for further expansion of Clemson University's contributions to the South Carolina Educational Radio Network.



## **"The Hobcaw Story" Takes Honors in Forestry Film Festival**

"The Hobcaw Story," a film about Hobcaw Plantation near Georgetown, S.C., has won third place in the Society of American Foresters (SAF) Forestry Film Festival. The film focuses on research supported by the Belle W. Baruch Foundation. The

facilities at Hobcaw Plantation, owned by Belle W. Baruch, daughter of Bernard Baruch, have been made available to institutions and individuals for research in wildlife, forestry, conservation and other areas. "The Hobcaw Story" won the SAF award September 14 and was shown October 1 at the SAF National Convention in Portland, Ore.

Total Enrollment by Courses and Academic Classification  
Clemson University  
First Semester 1973-1974

Major Course	Freshman (Semester)		Sophomore (Semester)		Junior (Semester)		Senior (Semester)		Five-Year (Semester)		Post Grad	Mast	PhD	Uncl	Total
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd					
Agriculture (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Agriculture	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
Agricultural Economics	6	2	7	7	5	4	6	1	0	0	0	11	10	0	59
Agricultural Engineering	11	2	2	1	4	1	3	1	0	0	0	4	5	0	34
Agric. Mech. and Business	3	2	2	2	0	0	0	0	0	0	0	4	0	0	13
Agronomy	5	4	10	3	2	3	9	7	0	0	0	6	2	0	51
Animal Industries	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Animal Physiology	0	0	0	0	0	0	0	0	0	0	0	0	13	0	13
Animal Science	13	3	12	8	17	7	12	9	0	0	0	11	0	0	92
Dairy Science	1	2	1	0	7	2	1	1	0	0	0	4	0	0	19
Economic Biology	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Economic Zoology	1	0	0	1	2	0	0	0	0	0	0	0	0	0	4
Entomology	1	1	1	2	3	2	1	1	0	0	0	17	13	0	42
Food Science	8	1	9	1	4	1	3	1	0	0	0	0	0	0	28
Horticulture	16	6	10	9	8	5	6	5	0	0	1	12	0	0	78
Nutrition	0	0	0	0	0	0	0	0	0	0	0	9	4	0	13
Plant Pathology	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5
Plant Physiology	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11
Plant Science	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
Poultry Science	1	0	1	0	2	0	2	0	0	0	0	1	0	0	7
Pre-Veterinary	68	12	29	5	13	2	4	0	0	0	0	0	0	0	133
Wildlife Biology	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16
College Total	138	36	86	39	67	27	47	26	0	0	1	100	60	0	627
Architecture (Non-Degree)	0	0	0	0	0	0	0	0	0	0	1	8	0	0	9
Architecture	0	0	0	0	0	0	0	0	0	0	0	32	0	0	32
Building Construction	11	13	20	17	31	13	14	12	0	0	1	0	0	0	132
City and Regional Planning	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26
Pre-Architecture (BA)	34	20	38	10	38	13	32	12	0	0	5	0	0	0	202
Pre-Architecture	75	10	24	7	9	1	1	0	0	0	0	0	0	0	127
Visual Studies	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
College Total	120	43	82	34	78	27	47	24	0	0	7	71	0	0	533

# Total Enrollment by Courses and Academic Classification

Clemson University  
First Semester 1973-1974  
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Major Course	Freshman (Semester)		Sophomore (Semester)		Junior (Semester)		Senior (Semester)		Five-Year (Semester)		Post Grad	Mast	PhD	Uncl	Total
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd					
Phys., Math & Bio. Scs. (Non-Deg)	0	0	0	0	0	0	0	0	0	0	1	10	0	0	11
Biochemistry	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12
Biology	9	1	4	0	0	0	0	0	0	0	0	0	0	0	14
Botany	8	2	5	1	1	1	2	3	0	0	0	11	0	0	34
Chemical Physics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemistry (BA)	2	0	1	1	4	0	2	3	0	0	0	0	0	0	13
Chemistry	18	1	7	7	10	3	3	3	0	0	1	14	27	0	94
Geology (BA)	1	0	0	1	2	2	0	1	0	0	0	0	0	0	7
Geology	5	2	3	1	4	2	2	1	0	0	0	0	0	0	20
Mathematics (BA)	10	2	6	3	5	1	11	0	0	0	0	0	0	0	38
Mathematics	44	8	23	4	16	12	23	4	0	0	0	51	28	0	213
Medical Technology	44	8	26	3	19	5	4	1	0	0	0	0	0	0	110
Microbiology	46	10	35	8	29	13	16	11	0	0	0	20	0	0	188
Physics (BA)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Physics	14	0	6	0	6	4	8	0	0	0	0	10	20	0	68
Pre-Dentistry	0	14	13	4	3	3	10	8	0	0	1	0	0	0	56
Pre-Medicine	2	19	48	11	11	3	19	9	0	0	3	0	0	0	125
Pre-Medicine Core	168	0	0	0	0	0	0	0	0	0	0	0	0	0	168
Pre-Pharmacy	32	5	18	6	1	0	0	0	0	0	0	0	0	0	62
Zoology	54	31	45	15	44	28	36	19	0	0	0	28	8	0	308
College Total	457	103	240	65	155	77	136	64	0	0	6	156	83	0	1542
Non-Degree	0	0	0	0	0	0	0	0	0	0	7	0	0	15	22
Sub-Total	0	0	0	0	0	0	0	0	0	0	7	0	0	15	22
CAMPUS TOTAL	2177	671	1393	579	1168	489	915	518	0	0	34	1276	226	15	9461

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Enrollment by Men and Women - Full Time and Part Time  
Clemson University  
First Semester 1973-1974

Classification	Full Time	<u>MEN</u>	Total	Full Time	<u>WOMEN</u>	Total	Full Time	<u>TOTAL</u>	Total
		Part Time			Part Time			Part Time	
1st Semester Freshman	1349	14	1365	794	20	814	2143	34	2177
2nd Semester Freshman	457	8	465	195	11	206	652	19	671
Sub-Total	1807	22	1829	989	34	1023	2796	56	2852
1st Semester Sophomore	841	14	855	521	17	538	1362	31	1393
2nd Semester Sophomore	417	11	428	143	8	151	560	19	579
Sub-Total	1258	25	1283	664	25	689	1922	50	1972
1st Semester Junior	757	10	767	391	10	401	1148	20	1168
2nd Semester Junior	362	11	373	110	6	116	472	17	489
Sub-Total	1118	21	1139	501	16	517	1619	37	1656
1st Semester Senior	619	12	631	274	10	284	893	22	915
2nd Semester Senior	365	72	437	65	16	81	430	88	518
Sub-Total	984	83	1067	339	26	365	1323	109	1432
1st Semester Five-Year	0	0	0	0	0	0	0	0	0
2nd Semester Five-Year	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	0	0	0	0	0	0	0
TOTAL	5167	152	5319	2493	98	2591	7660	250	7910
Graduate-Masters Level	403	292	695	136	445	581	539	737	1276
Postgraduate	16	10	26	2	6	8	18	16	34
Non-Degree	2	5	7	1	7	8	3	12	15
Graduate-Ph.D. Level	142	66	208	12	6	18	154	72	226
TOTAL	563	373	936	151	464	615	714	837	1551
CAMPUS TOTAL	5730	525	6255	2644	562	3206	8374	1087	9461
Clemson-Furman MBA Institutes	12 0	120 150	132 150	0 0	4 365	4 365	12 0	124 515	136 515
GRAND TOTAL	5742	795	6537	2644	931	3575	8386	1726	10,112



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Joseph B. McDevitt, Walter T. Cox, J. W. Jones, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, K. N. Vickery, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis, and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of September 3, 1973 were approved as submitted.

2. Clemson University Housing Institute

Statement and Recommendation: The Dean of the University recommended and the Council formally approved by mail ballot the organization of a Clemson University Housing Institute.

Action: Approved.

3. Division of Information Systems Development

Statement: A concept for a Division of Information Systems Development which would draw together highly skilled persons in computer and information science within the University for the purpose of design, development and implementation of innovative software and information systems for agencies and organizations external to the University was presented.

Recommendation: That the Council adopt the concept as presented for a Division of Information Systems Development.

Action: Approved.

4. Curriculum Changes

Statement and Recommendation: The Dean of the University recommends additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

I. COLLEGE OF AGRICULTURAL SCIENCES

A. Undergraduate Courses

1. New Courses:

- Agric 302 Organic Farming and Gardening, 2 cr (2 and 0)
- An Ph 301 Physiology and Anatomy of Domestic Animals, 3 cr (2 and 3)
- CRD 357\* Natural Resource Economics, 3 cr (3 and 0). Delete Ag Ec 357
- CRD 411\* Investment in Human and Natural Resources, 3 cr (3 and 0)  
Approved on condition that Econ 201 and Ag Econ 202 be listed as prerequisites.
- CRD 412\* Regional Economic Development Policy, 3 cr (3 and 0).  
Approved on condition that Econ 201 and Ag Econ 202 be listed as prerequisites.
- \*To be implemented only if the proposed B.S. Major in  
Community and Rural Development receives final approval.
- Hort 413 Advanced Turfgrass Culture, 3 cr (3 and 0)

2. Course Changes:

- Ent 461 Special Problems in Entomology and Economic Zoology, 1-3 cr.  
Revision of existing course.
- Hort 414 Retail Flower Business, 1 cr (1 and 0).  
Replaces part of Hort 408.
- Hort 416 Floral Design, 1 cr (0 and 3).  
Replaces part of Hort 408.
- Hort 461 Problems in Landscape Design, 3 cr (2 and 3).  
Replaces part of Hort 460 - to permit implementation of new course, Hort 462.
- Hort 462 Landscape Design Implementation, 3 cr (2 and 3).  
Replaces part of Hort 460 and allows students to become acquainted with bidding procedures, etc.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

## College of Agricultural Sciences (continued)

(B) Graduate Courses

- Hort 613 Advanced Turfgrass Culture, 3 cr (3 and 0)  
 Hort 661 Problems in Landscape Design, 3 cr (2 and 3)  
 Replaces part of Hort 660.  
 Hort 662 Landscape Design Implementation, 3 cr (2 and 3)  
 Replaces part of Hort 660.

(C) New Curriculum -- B.S. in Community and Rural Development

## MAJOR CURRICULUM IN COMMUNITY AND RURAL DEVELOPMENT

Freshman YearFirst SemesterSecond Semester

Bot 101 Plant Biology . . . . .	3 (3,0)	Agric 101 Intro to Agric . . . . .	1 (1,0)
and Bot 103 Lab. in Plt. Biol . .	1 (0,2)	Ch 102 Gen Chemistry . . . . .	4 (3,3)
or Zool 101 Animal Biology . . .	3 (3,0)	or Ch 112 Gen Chemistry . . . . .	4 (3,3)
and Zool 103 Animal Biol Lab . .	1 (0,2)	Engl 102 English Composition . . . .	3 (3,0)
Ch 101 Gen. Chemistry . . . . .	4 (3,3)	Math 104 Trigonometry* . . . . .	2 (3,0)
Engl 101 English Composition . . .	3 (3,0)	Zool 101 Animal Biology . . . . .	3 (3,0)
Hist 102 Amer. Hist. . . . .	3 (3,0)	and Zool 103 Animal Biol. Lab . . .	1 (0,2)
Math 103 College Algebra* . . . .	2 (3,0)	or Bot 101 Plant Biology . . . . .	3 (3,0)
Elective . . . . .	1	and Bot 103 Lab. in Plt. Biol . . .	1 (0,2)
	<u>17</u>	Elective . . . . .	1
			<u>15</u>

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

## College of Agricultural Sciences (continued)

B.S. in Community and Rural Development (continued)Sophomore YearFirst Semester

Econ 201 Principles of Econ . . . . .	3 (3,0)
History-Literature Requirement** . . . . .	3 (3,0)
Agric 201 Intro to Animal Ind . . . . .	3 (2,3)
Agron 202 Soils . . . . .	3 (2,2)
or Geol 101 Physical Geology . . . . .	4 (3,3)
Electives . . . . .	3 or 4
	<u>16</u>

Second Semester

Ag Ec 202 Agric Econ . . . . .	3 (3,0)
History-Literature Requirement** . . . . .	3 (3,0)
Agric 202 Intro to Plant Sciences . . . . .	3 (2,3)
Acct 201 Prin. of Accounting . . . . .	3 (3,0)
or Ag Ec 305 Ag Bus Anal . . . . .	3 (2,3)
Electives . . . . .	6
	<u>18</u>

Junior YearFirst Semester

Econ 314 Inter. Econ. Theory . . . . .	3 (3,0)
Ex St 301 Intro. Statistics . . . . .	3 (2,2)
CRD 357 Natural Resource Econ . . . . .	3 (3,0)
RS 301 Rural Sociology . . . . .	3 (3,0)
Pol Sci 302 State & Local Gov't . . . . .	3 (3,0)
Minor . . . . .	3
	<u>18</u>

Second Semester

Econ 407 Natl. Income Analysis . . . . .	3 (3,0)
Ex St 462, Stat. Applied to Econ . . . . .	3 (3,0)
Ag Ec 352 Public Finance . . . . .	3 (3,0)
RS 359 The Community . . . . .	3 (3,0)
Pol Sci 321 Gen Public Admin . . . . .	3 (3,0)
Minor . . . . .	3
	<u>18</u>

Senior YearFirst Semester

CRD 411 Investment in Human & Natural Resources . . . . .	3 (3,0)
CRP 412 City & Regional Planning Theory . . . . .	3 (3,0)
Minor . . . . .	6
Electives . . . . .	4
	<u>16</u>

Second Semester

Ag Ec 403 Land Economics . . . . .	3 (3,0)
RS 401 Human Ecology . . . . .	3 (3,0)
CRD 412 Regional Econ Dev Policy . . . . .	3 (3,0)
CRP 472 Planning Admin and Practice . . . . .	3 (3,0)
Minor . . . . .	3
Electives . . . . .	1
	<u>16</u>

\* Math 101 and 102 may be taken in lieu of Math 103 and 104. (Electives are reduced by two semester hours under this option.)

\*\* One course to be selected from each of the following groups. (At least one literature course is required.)

Group I : Engl. 203, 205, 207, 231, Hist 171, 172.

Group II: Engl. 204, 206, 208, 231, Hist 172, 173.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

College of Agricultural Sciences (continued)

B.S. in Community and Rural Development (continued)

Minors Available

Business  
International Agriculture  
Science  
Agricultural Education  
Agricultural Mechanization  
Agronomy - Crops and Soils  
Animal Science  
Botany  
Chemical Engineering  
Chemistry  
Dairy Science - Manufacturing  
Dairy Science - Production  
Entomology  
Food Processing  
Food Science  
Geology  
History  
Horticulture  
Industrial Management (Manufacturing Management)  
Mathematics  
Microbiology  
Political Science  
Poultry Science  
Psychology  
Recreation and Park Administration  
Sociology  
Visual Studies and History of Art and Architecture  
Zoology

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

II. COLLEGE OF ARCHITECTURE

A. Undergraduate Courses

1. New Courses:

- |       |     |   |
|-------|-----|---|
| Arch  | 553 | Architectural Design VII, 9 cr (3 and 18).<br>Replaces Arch 591, 11 cr (5 and 18).  |
| Arch  | 554 | Architectural Design VIII, 9 cr (3 and 18).<br>Replaces Arch 451, 8 cr (2 and 18).  |
| Arch  | 559 | Terminal Project in Architecture, 9 cr (1 and 24).<br>Replaces Arch 592, 11 cr (5 and 18).                                |
| B1 Sc | 432 | Construction Equipment and Formwork, 3 cr (3 and 0).<br>Replaces Ar Co 432, 2 cr (2 and 0) and B1 Sc 432, 2 cr (2 and 0). |
| B1 Sc | 475 | Building Equipment and Systems, 3 cr (3 and 0).<br>Replaces Arch 475, 3 cr (3 and 0).                                     |
| B1 Sc | 476 | Building Equipment and Systems, 3 cr (3 and 0).<br>Replaces Arch 476, 3 cr (3 and 0).                                     |

B. Graduate Courses

1. New Courses:

- |       |     |   |
|-------|-----|---|
| B1 Sc | 632 | Construction Equipment & Formwork, 3 cr (3 and 0)                                   |
| B1 Sc | 675 | Building Equipment & Systems, 3 cr (3 and 0)<br>Replaces Arch 675, 3 cr (3 and 0)   |
| B1 Sc | 676 | Building Equipment and Systems, 3 cr (3 and 0)<br>Replaces Arch 676, 3 cr (3 and 0) |

C. Proposed Curriculum - Bachelor of Architecture Degree

The Bachelor of Architecture program is available to a limited number of students who have completed a first degree in Pre-Architecture or its equivalent and who show professional promises. Admissions to this program will be with the approval of the admissions committee of the College of Architecture.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

## College of Architecture (continued)

## Architecture Curriculum

## Bachelor of Architecture

## Fifth Year

## First Semester

Arch 553 Arch Design VII 9(3-18)  
 CRP 441 History of Planning 3(3-0)  
 \*Elective 3

## Second Semester

Arch 554 Arch Design VIII 9(3-18)  
 Arch 481 Arch Off. Practice 3(3-0)  
 \*Elective 3

## Sixth Year

## First Semester

Arch 559 Terminal Project in Arch 9(1-24)  
 Arch 403 Analysis & Criticism of Arch 3(3-0)  
 \*Elective 3

\*Electives shall be determined by each individual student in consultation with his major advisor, to complement and reinforce the student's planned area of study.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

III. COLLEGE OF EDUCATION

A. Endorsement of Army ROTC Cross-enrollment

The cross-enrollment agreements between Clemson and other area institutions permitting the Army ROTC Detachment at Clemson to expand its program has been endorsed by the Undergraduate Council. These agreements have been signed with Anderson College, Central Wesleyan College, and Tri-County TEC, and endorsement by the Council was recommended.

IV. COLLEGE OF ENGINEERING

A. Undergraduate Course

1. New Course:

E&CE 469 Computer Applications for Nonengineers, 2 cr (2 and 0).

V. COLLEGE OF LIBERAL ARTS

A. Undergraduate Courses

1. New Courses:

Engl 448 American Humor, 3 cr (3 and 0). List as prerequisite: Junior standing.

Pol Sc 474 Comparative Asian Governments, 3 cr (3 and 0).

Pol Sc 475 Political Systems of Latin America, 3 cr (3 and 0). List as prerequisite: Pol Sc 101, 201, or permission of instructor.

Pol Sc 476 Political Systems of the Middle East, 3 cr (3 and 0). List as prerequisite: Pol Sc 101, 201, or permission of instructor.

Psych 485 Experimental Social Psychology, 3 cr (3 and 0).

Psych 487 Practicum in Applied Psychology, 3 cr (1 and 4).

B. Graduate Course

1. New Course:

Engl 648 American Humor, 3 cr (3 and 0)



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

VI. COLLEGE OF NURSING

A. Deletion and Addition -- Baccalaureate Program

Delete: Nurs 415, Nursing as a Social Force, 3 cr (3 and 0)

Add: Elective--201 or above, 3 cr (3 and 0)

VII. COLLEGE OF PHYSICAL, MATHEMATICAL, AND BIOLOGICAL SCIENCES

A. Undergraduate Courses

1. New Courses:

Bot 411      Introductory Mycology, 3 cr (2 and 3). Replaces Bot 451

Ch 436      Spectroscopy Laboratory, 2 cr (0 and 6). Replaces Ch 428.

Geol 411      Research Problems, 1-3 cr (0 and 3-9). Change in credits from 3 cr (0,9)

Phys 247      Science and Society, 2 cr (2 and 0).

B. Graduate Courses

1. New Courses:

Bot 611      Introductory Mycology, 3 cr (2 and 3). Replaces Bot 651.

Bot 811      Advanced Mycology I, 4 cr (3 and 3). Replaces Bot 802.

Bot 812      Advanced Mycology II, 4 cr (3 and 3). Replaces Bot 802.

Bot 821      Inorganic Plant Metabolism, 4 cr (3 and 3). Replaces Bot 811.

Bot 822      Organic Plant Metabolism, 3 cr (3 and 0). Replaces Bot 812.

Bot 823      Plant Growth & Development, 3 cr (3 and 0). Replaces Bot 813.

Bot 824      Mode of Action of Growth Subst., 4 cr (3 and 3). Replaces Bot 814.

Bot 831      Advanced Plant Taxonomy, 3 cr (2 and 3). Replaces Bot 821.

Ch 636      Spectroscopy Laboratory, 2 cr (0 and 6). Replaces Ch 628.

Ch 821      Organic Chemistry I, 3 cr (3 and 0). Replaces Ch 823.

Ch 822      Organic Chemistry II, 3 cr (3 and 0). Replaces Ch 823.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

College of Physical, Mathematical and Biological Sciences (continued)

C. Course Deletion:

Bot 822 Plant Taxonomy II, 4 cr (2 and 6)

Action: Approved.

5. Clemson University Undergraduate Scholarships Policies and Procedures

Statement and Recommendation: The Dean of the University presented and recommended the Clemson University Undergraduate Scholarships Policies and Procedures as follows:

Part I - Developmental Procedures

In order to clarify and coordinate through the Development Office the numerous activities related to Clemson University's expanding program of scholarship aid to undergraduate students, the following developmental procedures are announced. These procedures will pertain only to scholarship aid and not to awards.

A University Scholarship is defined as one which the University administers and selects the recipient. A written agreement is necessary to establish this type of scholarship aid.

A Memorial Scholarship is defined as an endowed fund which the University administers and selects the recipient. A minimum of \$10,000 is required to establish this type of scholarship aid and a written agreement is necessary. Any scholarship whose principal amount is less than \$10,000 will be placed in the Consolidated Memorial Scholarship Fund, and administered in accordance with Item 6 of the "Memorial Scholarships Policy" as approved by the Executive Officers on January 27, 1972.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

Scholarships wherein the donor selects the recipient are not University scholarships. The granting and financial support of donor-selected scholarships must be accomplished directly between the donor, or his agent, and the recipient. Funds to support such scholarship aid may be transmitted by the donor directly to the recipient or to the University Accounting Division to be credited to the account of the recipient. The University assumes no responsibility to the donor for refunds or other accounting of funds.

Clemson University needs and seeks to encourage the development of as much scholarship aid as possible for its undergraduates. Funds are constantly needed to provide scholarships for worthy students. The University encourages faculty, staff, alumni, and friends to suggest potential donors of scholarship funds to the Development Office. In order that all efforts in this direction may be better coordinated, the following procedures are established:

1. Scholarship agreements will request that all gifts relating to scholarships be directed to the Vice President for Development.
2. All persons instrumental in the development of scholarships are requested to transmit to the Vice President for Development a detailed memorandum each time scholarship negotiations are begun with a potential donor. The Vice President for Development shall be the authority for negotiating all scholarship agreements. Under no circumstances is anyone authorized to commit the University to any scholarship prior to the completion of a formal, written agreement between a donor and the University.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

3. All proposed scholarship agreements resulting from donor contacts with faculty, staff, and others responsible shall be forwarded with full recommendations through the appropriate College Dean to the Vice President for Development. A representative of the College in which the student recipient is enrolled and representatives from the Development Office, the Accounting Division, the University Scholarships and Awards Committee, and the Student Financial Aid Office, will review the agreement and forward it with recommendations through the Vice President for Executive Affairs and University Counsel, Vice President for Development, and the Vice President for Academic Affairs to the Vice President for Business and Finance for the signature that makes the agreement an official document. The Vice President for Development, the Vice President for Business and Finance, and a representative from the College in which the student recipient is enrolled will participate in the final negotiations with the donor.
4. Copies of the officially signed agreement will be distributed by the Office of the Vice President for Business and Finance to the Vice President for Development, the Director of Student Financial Aid, and the Dean(s) of the College(s) involved, if any.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

Generally, unrestricted scholarships provide greater flexibility in meeting changing needs and conditions, although it is recognized that restricted scholarships often fill a real need in support of essential programs. Also, the wishes and recommendations of the donor must receive priority attention. Consequently, persons representing Clemson University in seeking scholarship program support are requested to use discretion in suggesting guidelines for donors to consider.

When, however, there is an opportunity for the person representing the University to make appropriate suggestions, or if he is asked what the wishes of the University are, the following guidelines are suggested:

1. The best scholarship aid is that which is least restricted. The unrestricted scholarship provides a flexibility which enables it to meet changing needs and conditions.
2. First preference should be given to University-wide scholarships.
3. Second preference should be given to scholarships restricted to students studying in a particular College of the University.
4. Third preference should be given to scholarships restricted to students studying in a particular department or curriculum of the University.
5. Potential donors should be discreetly discouraged, when possible, from restricting their scholarship aid more than indicated above.

Sample agreements for Memorial and University Scholarships are attached for use as guidelines in developing a memorandum of agreement with donors.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

Part II - Selection Policies and Procedures

Clemson University undergraduate scholarships are granted according to the following policies and procedures. Departure from such policies and procedures should be made only with the expressed consent of the Dean of the University.

A. Policies

1. Responsibility for the coordination of the selection of scholarship recipients is vested in the Chairman of the University Scholarships and Awards Committee.
2. The responsibility for the selection and final approval of recipients of all scholarships is vested in the University Scholarships and Awards Committee.
  - a. Recipients of University-wide scholarships, other than those for which contractual agreement provides for the selection by the donor, shall be selected directly by the University Scholarships and Awards Committee.
  - b. The various College Scholarships and Awards Committees shall recommend to the University Scholarships and Awards Committee, for final approval, a qualified applicant for each scholarship available in their respective colleges.
  - c. A qualified applicant for the receipt of each department scholarship shall be recommended to the appropriate College Scholarships and Awards Committee by the department in which the scholarship is offered. Evidence that the applicant qualifies for the stipulated scholarship should accompany the recommendation.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

d. Chairmen of College Scholarships and Awards Committees shall keep appropriate deans and department heads apprised of the status of the scholarship programs in their respective colleges and/or departments.

3. Administration relating to the awarding of scholarships will be the responsibility of the Student Financial Aid Office. Included in this responsibility is:

- a. Receipt of all scholarship applications.
- b. Notification of students with applications for financial aid on file that they must file a new application if they wish to remain eligible for the next academic year.
- c. To assure the widest possible exposure of the availability of scholarship assistance, at appropriate times, the Student Financial Aid Office will have this information published in the Tiger and appropriate announcements made over WSBF radio. Student Financial Aid Office will send a memorandum to the chairman of each College Scholarships and Awards Committee requesting that he have their respective faculties announce to their classes the availability of scholarship assistance.
- d. Screening of applications to ascertain academic backgrounds.
- e. Collecting of financial need data (where appropriate).
- f. Maintaining a file of (scholarship) contracts between the University and donors.
- g. Determining - in advance, each year - the availability of funds in support of the various scholarships.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

- h. Informing deans and/or department heads of the appropriate colleges and/or departments that, whenever a number of scholarships from the same donor are to be awarded in more than one college or department, a decision regarding the exact allocation of these scholarships is needed.
- i. Supplying the Chairman of each College Scholarships and Awards Committee with the following:
  - i. A list of the scholarships that will be available in that specific college for the coming academic year and the dollar value of each when available.
  - ii. Information pertinent to the selection of the best qualified applicant as the recipient of a specific scholarship.
- j. Assuring that various students recommended for receipt of scholarship assistance are properly qualified under the terms of the written contracts with the appropriate donors.
- k. Presenting names of the applicants approved by the College Committees to the University Scholarships and Awards Committee for approval.
- l. Notifying all recipients of their awards (with copies of the letters to each of the college deans and Chairmen of Scholarships and Awards Committees within the Colleges).
- m. Notifying donors of the identity of the various recipients.
- n. Preparing vouchers for stipends of the various recipients and delivering the stipends when received from Accounting.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

- o. Specifically excluded are those transactions, etc. having to do with recipients of 'donor-selected' scholarships.

E. Guidelines

1. All entering freshmen being considered for a scholarship awarded by the University must have a minimum predicted grade-point ratio of 2.0 for their freshman year.
2. Students already enrolled in the University and transfer students who are being considered for a scholarship must have a minimum cumulative grade-point ratio of 2.0. Transfer students should have completed one semester of work at Clemson University before becoming eligible for scholarship assistance.
3. Where financial need is an element or a prerequisite to selection, the University and its several subdivisions will utilize the services and reports of College Scholarships Service as a guide for need determination.
4. No one student shall receive any combination of University-awarded scholarships and financial aid in excess of annual costs (educational and allied). Specifically excluded from this are the various 'donor-selected' scholarships and other aid (normally awarded by industry).
5. The general practice with respect to 'renewable' scholarships will be to review annually the most current record available for the holder so as to determine whether the holder's current academic standing and academic progress warrant renewal in view of his academic standing and academic progress relative to other eminently qualified applicants. Ordinarily renewals will be made whenever, in the opinion of the appropriate College Scholarships and Awards Committee, there is evidence of

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

scholarly achievement and renewal does not deprive a significantly more worthy applicant of scholarship assistance of similar proportion

6. No scholarship will be awarded until the University has received assurance that it will be funded for the academic year in question.
7. Under no circumstances will any person be notified that he has been awarded a scholarship (or even the possibility of being awarded a scholarship) until the University Scholarships and Awards Committee has made or approved the selection and the Student Financial Aid Office has written the recipient a letter of notification.
8. Announcements of scholarship awards contained in the annual Scholarships and Awards Day programs will relate to those scholarships awarded for the academic year then in progress rather than the coming academic year.
9. In order to provide continuity of operation during usual summer breaks (i.e., the approximate period from early May through mid-August which finds many faculty members not on campus), scholarships will be administered and recipients chosen during those times as the Chairman of the University Scholarships and Awards Committee deems most appropriate for each individual situation.

C. Procedures

1. Beginning in January of each year, all eligible students or potential students may apply to the Student Financial Aid Office for any type of scholarship assistance desired for the coming academic year. In general, consideration for scholarship assistance will be afforded

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

only those students who file an appropriate application with the Student Financial Aid Office for the academic year for which assistance is sought. Applications must be renewed each academic year. Normally, applications must be filed prior to February 1.

2. On or about March 1 of each year, the Student Financial Aid Office will collate the various scholarship applications for the coming academic year into categories pertaining to the various curriculums and/or colleges. This office will prepare a list for each college of all scholarships available to this college along with their dollar value when available. This office will, as an aid to the various College Scholarships and Awards Committees, prepare a preliminary selection listing of those applicants seemingly best qualified to hold specific scholarships.
3. On or about March 15, the information of item C2 will be forwarded to the appropriate college deans. Scholarships and Awards Committees of the various academic units will consider the selection of applicants who will receive scholarship assistance and will forward their recommendations to the Student Financial Aid Office in sufficient time for the University Scholarships and Awards Committee to take final action not later than April 1.
4. Upon receiving the information from the colleges, the Student Financial Aid Office will present the names of the applicants approved by the College Committee to the University Scholarships and Awards Committee for approval.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

5. Following this approval, the Student Financial Aid Office will notify all recipients of their awards, with copies of the letters of notification going to the appropriate college deans and Chairmen of College Scholarships and Awards Committees.
6. Student Financial Aid will voucher the necessary stipends or-- when appropriate-- request Bursar to credit individual student accounts with stipends.
7. Student Financial Aid Office will disburse stipends to recipients.  
(It should be noted that funds in support of some University scholarships are not made available by donors until after the start of each academic year; in such cases, none of the above dates and deadlines apply-- procedures are effective only as the scholarships actually become available.)
8. A 'make-up' scholarship application period will be effective during the period November 1-30 for only those scholarships that have been vacated or have gone unawarded. Deans of the colleges are requested to ensure that the chairmen of their College Scholarships and Awards Committees advise concerned faculty members of existing vacancies.  
On or about December 1 of each year, the Student Financial Aid Office will commence the processing of such applications--such as outlined in paragraphs 2-3 above.
9. University scholarships are intended to serve both as recognition of outstanding academic records and as financial aid in paying the expense of a college education. Unlike special one-time awards made at the close of a given semester in recognition of past work,



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, OCT. 1, 1973 (Continued)

University scholarships will be paid only to currently enrolled Clemson students. Students wishing to accelerate their programs of study through attendance at summer session(s) and to utilize a portion of their stipends for those summer sessions may do so providing that permission be requested of the Scholarships and Awards Committee by not later than May 1.

A student who graduates or who leaves the University before he has completed the specified period covered by the scholarship, however, will forfeit the unpaid portion of the money, which will, should the terms of the scholarship so allow, be awarded to another qualified student. If there is no other qualified student at the time the unused portion of the scholarship becomes available, the money will stay in the University scholarship fund to increase the available awards for the following year.

Any scholarship whose stipulations specifically contradict the above policy will be administered according to its own explicit rules, rather than according to this general policy.

D. R. F. Poole Alumni Scholarships

The Poole Alumni Scholarships are administered directly by the University Scholarships and Awards Committee under policies and procedures which are determined by the Committee and which are concurred in by the Alumni National Council.

Action: Approved.

*E. N. Tyndall*  
E. N. Tyndall  
Secretary

MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPTEMBER 11, 1973

President Fulton called the meeting to order at 4:20 p.m. He announced that since Professor Arnold, a Senator from the College of Liberal Arts, will be on leave until July 1974, L. E. Seamon had been appointed as his replacement until an election can be held. President Fulton suggested some modifications in the wording on pages 2 and 3 of the Minutes for the meeting of Aug. 21. The modifications were accepted by the Senate and the minutes were approved as amended.

President's Report

President Fulton reported on the meeting of the Senate's Advisory Committee on Aug. 29. At that meeting, the items already being considered by each Senate committee were reviewed; a list of these items is appended to these Minutes. President Fulton reported some new items suggested by Advisory Committee members for committee study. These include: charges by the Physical Plant (Policy Committee Office of Financial Aid (Admissions and Scholarship); transfer of credit by students fr tech centers (Admissions and Scholarship); budgeting for equipment one year in advance of need (Research and Admissions and Scholarship); and vending contracts (Professor Adkins).

President Fulton distributed to the Senators copies of a letter expressing concern about parking problems which he had sent to President Edwards with the approval of the Advisory Committee. In his letter, President Fulton particularly emphasized the need for strict enforcement of parking regulations and the problems that are apt to arise when Phase II of the parking plan goes into effect Jan. 1, 1974.

President Fulton also announced that J. E. Matthews and J. C. Fanning had been recommended for appointment to the University's Disciplinary Committee.

President Fulton then reviewed matters considered at the meeting of the Educational Council on Sept. 3. He reported that President Edwards had stated that there is ample parking space on campus to accommodate faculty, staff, and student cars. President Edwards had also stated that he was more convinced than ever that the ceiling of 10,000 students should be held.

Regarding the Bookstore, President Fulton noted that President Edwards had stated to the Council that there had been some problems this fall because some textbook orders were late arriving and in some cases not enough books were ordered. President Fulton pointed out some disadvantages in having the Bookstore order textbooks from used-book companies: authors lose royalties, publishers suffer, professors are unable to get desk copies of textbooks, professors are forced to make textbook adoptions so early that the numbers needed may be grossly underestimated, and students do not benefit from lower prices.

MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

Professor R. A. Banister, director of the Cooperative Education Program, had described the program to the Council and reported that a publication, Cooperative Education, had been prepared to assist faculty members who advise students interested in the program. Professor Banister had indicated that enrollment in the program was limited (only 19 participants are currently on work assignments; a goal of 100 has been set) and that there are no black students enrolled in the program. However, he had also said that all of the students who are currently participating seem to find the program rewarding both educationally and financially.

Professor Fulton also reported on a proposed Public Health Data System. It involves a computer program designed by Professor J. C. Peck (Math Sci), Professor R. Schouest (Math Sci) and Mr. Francis Crowder (Appalachia II Health District) under the auspices of the Appalachia II Health District. The program would provide instant access by medical personnel to health records and would facilitate scheduling of medical appointments in Greenville and Pickens counties. Its advantages were recently outlined in Greenville to a group including Governor West and his staff, members of the State Board of Health, and members of the State Pollution Control Authority, among others. The presentation in Greenville was so successful that Governor West had stated that the system likely will be implemented statewide.

President Fulton reported that Dr. Howard Boozer, Executive Director of the Commission on Higher Education, had met with each of the Academic Deans and with President Edwards at the University on Sept. 7. The deans told Dr. Boozer of the programs and the special needs of their respective colleges. President Edwards discussed with Dr. Boozer Clemson's position regarding formula budgeting.

President Fulton said he had pointed out to the Educational Council that unusual salary differentials cannot all have been solved in the current University budget. President Fulton also gave his support to efforts to keep faculty salaries here competitive, by academic discipline, with those at universities which have missions similar to those of Clemson. To this end, President Fulton said he had expressed the hope that Vice President Wilson would continue to obtain pertinent faculty salary information from other universities.

Concerning the matter of financing equipment needs, President Fulton reported that he had told the Educational Council that spending no money for equipment in 1972-1973 in a university which is scientifically oriented had been a major tragedy and that, while he agreed that people are more important than equipment, equipment is essential to carrying out the University's missions of service to the people. Furthermore, he had said that, if University enrollment is to be frozen at 10,000 and, thus, faculty growth curtailed, it will be necessary to budget more funds for faculty travel, sabbatical leaves, the library, and publication expenses so that the present faculty can respond to the demand for changes in academic specialties occurring in our rapidly changing society.



MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

President Fulton said that Mr. Dave Partridge of station WFBC had requested from the University names of blacks who might contribute to informational programming at WFBC. President Fulton said also that Mr. Melvin Long, Director of Public Relations, requested that all public relations matters be coordinated through his office. When necessary, Mr. Long said, he might need to seek assistance from faculty members in requests for information from the news media. He urged faculty members to cooperate with the Tiger staff, by preparing written statements on long-range news items and by freely offering spontaneous statements on timely items.

An updated list of the Development Office's forecast for permanent improvements was distributed to the Senators by President Fulton.

President Fulton then reported on his meeting on Sept. 3 with Dean Hurst regarding the Senate's RESOLUTION OF ANNUAL LEAVE (VACATION) (FS-73-5-3). According to President Fulton, Dean Hurst had stated that this new policy proposal should be included along with a thorough revision of the Faculty Manual. Dean Hurst had proposed that such a revision be undertaken during the current academic year by the Faculty Senate. When the revision was completed, he had said, he would consider the proposal on the leave policy for 12-month faculty along with all the other recommended revisions.

Professor Dillon then moved the adoption of a RESOLUTION OF FACULTY PROTEST (FS-73-9-1) drafted by Professors Dillon, Fulton, and Skelton following guidelines and suggestions of the Advisory Committee of the Senate in its meeting on Sept. 6. Professor Jacobus moved the elimination of one paragraph from the Resolution. Professor Jacobus' amendment was accepted unanimously. The amended Resolution reads as follows:

WHEREAS the Faculty Senate on two occasions, February 13, 1973, and May 8, 1973, had endorsed unanimously the RESOLUTION OF ANNUAL LEAVE (VACATION) (FS-73-5-3), and

WHEREAS the Faculty Senate on June 12, 1973, unanimously passed the RESOLUTION OF CONCERN BY THE FACULTY SENATE OVER DELAY IN APPROVING THE NEW LEAVE POLICY (FS-73-6-8), and

WHEREAS the University Administration on July 26, 1973, requested and received from the Board of Trustees authority to deal administratively with changes in personnel policies "... in order to insure timely amendment to existing policies ...," and

WHEREAS on September 3, 1973, the Dean of the University reported to the President of the Faculty Senate his decision to reserve judgment on the RESOLUTION OF ANNUAL LEAVE (VACATION) until the Faculty Senate recommends to the Dean of the University a revision of the entire FACULTY MANUAL including the RESOLUTION OF ANNUAL LEAVE (VACATION) as part of the revision, and



MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

WHEREAS delay in implementation of the recommended leave policy causes confusion in planning for leave among our twelve-month faculty who anticipate retirement in the near future, and

WHEREAS the FACULTY MANUAL must be considered a dynamic document serving the needs of the faculty of a dynamic university; now therefore,

BE IT RESOLVED THAT the Faculty Senate protests vigorously the delay by the Administration in implementing the leave policy contained in the RESOLUTION OF ANNUAL LEAVE (VACATION).

BE IT FURTHER RESOLVED THAT the Dean of the University arrange a meeting at the early convenience of all parties among the President of the University, the Dean of the University, the President of the Faculty Senate, and the Chairman of the Policy and the Welfare Committees of the Faculty Senate to discuss implementing the recommended leave policy without total revision of the FACULTY MANUAL.

In the discussion it was pointed out that (1) adoption by the Administration of the new leave policy was generally felt to be urgent, (2) the present Faculty Manual has not been in effect long enough to have been adequately tested, and (3) several matters (such as the TIAA retirement program) will still be unresolved next spring, so that parts of the revised Manual might be obsolete very soon after it was published.

The amended Resolution passed unanimously.

President Fulton announced that the Undergraduate Council will probably establish a committee to study the Senate's Resolutions on optional final examinations (FS-73-6-1) and on prescribing a minimum GPR for graduates in their major (FS-73-6-2). He suggested that he or Professor Steirer (chairman of the Admissions and Scholarship Committee, which had sponsored the resolutions) might appear before any such study committee of the Undergraduate Council to support the resolutions.

President Fulton reported that members of the Planning Council had discussed the Senate's Resolutions requesting additional representation on the Landscape and Site Development Committee (FS-73-7-2) and publication of development plans 30 days in advance of implementation (FS-73-7-3). The council unanimously agreed that the Planning Council meet each month of the calendar year. Two other recommendations, passed by the Planning Council to the Executive Officers, suggested that students and faculty members be added to the Landscape and Site Development Committee, that at least one faculty member have a background that would add professionally to this committee, that this committee should communicate to the University family and plans and drawings which might be seriously controversial, and that the committee should make public, prior to the implementation of certain work to be done, notices to the University family.

MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

A tour of local Experiment Stations for members of the Faculty Senate was scheduled for Tuesday, Sept. 18.

Finally, President Fulton announced that a program called "Speak Out," sponsored by the Forensic Union and the Student Senate, will be scheduled during Oct. or Nov. To be held in the Amphitheater, the meeting will provide an opportunity for students and faculty members to discuss issues, hopefully those related to the University.

Committee Reports

For the Admissions and Scholarship Committee Prof. Steirer simply noted that several topics were under consideration (see the attachment to these minutes).

For the Policy Committee, the chairman, Prof. Skelton, introduced a RESOLUTION ON UNIVERSITY COMMITTEE MEETINGS (FS-73-9-2):

WHEREAS some committee members have been unable to attend certain committee meetings because of a lack of advance notice, and

WHEREAS some committee chairmen have not published an agenda for meetings resulting in lack of preparation by some committee members, and

WHEREAS publication of committee meeting minutes has been delayed on some occasions, therefore

BE IT RESOLVED that chairmen of university committees publish an agenda for committee meetings and submit the agenda and notification of meetings to committee members at least one week in advance when possible.

BE IT FURTHER RESOLVED that minutes of university committee meetings be published and distributed through normal channels as soon as possible following meetings.

Prof. Steirer inquired why the Resolution did not apply to University councils; Prof. Beckwith responded that the councils seem to be less faculty-oriented. Prof. Beckwith also raised the problem of implementation. Prof. Cross pointed out that the Resolution would be worthwhile even if only one more committee's agenda were published.

The Resolution passed unanimously.

MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

Prof. Skelton introduced a RESOLUTION CONCERNING APPOINTMENT OF UNIVERSITY COMMITTEES (FS-73-9-3). After some discussion, the senators decided that the most appropriate wording would be as follows:

WHEREAS concern has been expressed to the Faculty Senate concerning utilization of faculty expertise on university committees, and

WHEREAS in the past some university committees have been appointed without taking advantage of faculty expertise, therefore

BE IT RESOLVED that the Dean of the University utilize pertinent faculty expertise on appropriate university committees.

In the discussion, the Senators generally felt that some urging was needed to have faculty experts placed on appropriate University committees.

The Resolution passed.

Prof. Skelton introduced a RESOLUTION ON THE FACULTY SENATE PRESIDENT'S BUDGET (FS-73-9-4):

WHEREAS some means should be available to the President of the Faculty Senate for paying expenses of that office, and

WHEREAS the department of which the President is a member has on occasion paid such expenses as telephone, duplicating, and secretarial help in the past, therefore

BE IT RESOLVED that expenses incidental to operating the office of President of the Faculty Senate be a budgeted item in the University budget.

President Fulton pointed out that, at present, the department of which the Senate President is a member is not financially compensated for the fact that he or she teaches only half-time.

The Resolution passed unanimously.

Finally, Prof. Skelton introduced a RESOLUTION CONCERNING FACULTY EVALUATION OF ACADEMIC ADMINISTRATORS (FS-73-9-5). A suggestion to revise the wording by Profs. Roberts and Sherrill was unanimously accepted. The revised Resolution read as follows:



MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

WHEREAS there had been considerable discussion concerning faculty evaluation of academic administrators, and

WHEREAS, if properly conducted, such evaluation could prove beneficial to the entire University, therefore

BE IT RESOLVED that the President of the Faculty Senate appoint an Ad Hoc Committee to develop a procedure for faculty evaluation of academic administrators.

Prof. Bauld inquired how the evaluations would be used. Prof. Skelton responded that the use of the evaluations was a matter which the committee established by the Resolution would have to decide.

The revised Resolution passed unanimously.

Prof. Beckwith moved that the Senate meeting be adjourned until Tues., Sept. 25, since several members had to leave to meet classes. The motion was defeated.

For the Research Committee Prof. Bauld enumerated the items on its agenda (see the attachment to these minutes).

For the Welfare Committee Prof. Dillon reported that Chief Weeden and Col. McCarter, chairman of the Traffic Committee, had agreed to permit faculty members to leave bicycles parked in their offices. He also noted the memorandum from President Edwards dated Aug. 20 increasing the compensation for breakfast and dinner for faculty members' travel allowances.

Prof. Dillon introduced a RESOLUTION ON RESTRAINT OF SALES REPRESENTATIVE OF NON-ACADEMICALLY ORIENTED COMPANIES (FS-73-9-6) which would prohibit such individuals from "contacting faculty and staff members during the hours from 8:00 a.m. to 5:00 p.m. on campus during the work day." It was argued in opposition to the Resolution that it was easier to tell them "no" in the office and better not to have them coming to peoples' homes. The Resolution was defeated.

Finally, Prof. Dillon introduced a RESOLUTION ON ANNUAL SALARY INFORMATION (FS-73-9-7):

WHEREAS it is the concern of the Faculty Senate that the Clemson University faculty salaries be sufficient to attract and maintain a distinguished faculty, and

WHEREAS relative University faculty salaries should be equitable and competitive with universities with missions similar to those of Clemson University, and



MINUTES OF THE MEETING OF THE FACULTY SENATE, SEPT. 11, 1973 (Continued)

WHEREAS salary averages, medians, maxima and minima give some indication of the extent to which faculty salaries are sufficient, equitable and competitive, therefore

BE IT RESOLVED that the Chairman of the Welfare Committee of the Faculty Senate at the beginning of each academic year receive from the Dean of the University the university-wide average, maximum, minimum and median faculty salaries in each rank converted to equivalent nine months salaries and also receive the average, maximum, minimum and median salaries broken into occupancy classes by college, rank and sex converted to equivalent nine months salaries and reflecting the number of faculty in each occupancy class with the understanding that if any occupancy class contains less than five members no information will be given other than the number in the class.

The Resolution passed unanimously.

The Ad Hoc Committees on the Motor Pool, on Faculty Workloads, and on Advising the Student Relations Committee had no reports.

The meeting adjourned at 6:35 p.m.

Russell D. Shannon, Secretary

Members absent: F. H. Hedden, W. Baron

COLLEGE OF EDUCATION

Harold F. Landrith (Dean) spoke at the SCEA District meetings in Charleston, Oct. 1, in Orangeburg, Oct. 2 and in Anderson, Oct. 3 on The National Teachers Examination: Its Use and Misuse.

Harold F. Landrith served as a member of the Southern Association of Schools and Colleges evaluation committee for Barnwell High School during the week of Oct. 8.

COLLEGE OF ARCHITECTURE

James Mills - One Man Exhibit, November 7 - 30. The graduate school of Fine Arts at the University of Tennessee sends us the work of one of their painters. This is the first in a series of yearly exhibitions from graduate schools in the southeast featuring painters, sculptors, printmakers, and photographers.

ITEMS BEING CONSIDERED BY FACULTY SENATE COMMITTEES

Admissions and Scholarship

- (1) Review of duplication in undergraduate programs and courses
- (2) Implementation of degree programs for those who have left Clemson to enroll in accredited postgraduate degree programs
- (3) Admissions policies
- (4) Evaluation of faculty by students, colleagues, and the Administration
- (5) Attendance and grading policies

Policy

- (1) Reapportionment of the Faculty Senate
- (2) Orientation of new faculty members
- (3) Tenure policies
- (4) Advice given by the Administration if sought by prospective donors whose gifts lead to endowment of professorships

Research

- (1) Study of indirect cost rates
- (2) Review of duplication in graduate courses and programs
- (3) Study of nonproductive graduate programs
- (4) Need for a Research Council
- (5) Need for a separate Office of University Research
- (6) Continuing Education Center concerns

Welfare

- (1) Determination of extent to which salary inequities have been removed
- (2) University faculty and staff housing
- (3) Removal of telephone inequities
- (4) Phase II parking concerns
- (5) Tax-sheltered annuities
- (6) Work with E. L. McLean (who represents Clemson on the TIAA-S. C. Retirement System Committee of the Council of Presidents of S. C. Colleges and Universities)
- (7) Group purchase plan for automobile insurance

GRADUATE COUNCIL MINUTES, SEPTEMBER 14, 1973

The meeting of the Graduate Council was called to order by Dean Schwartz. Present for the meeting were Dr. Brown, Dr. Gahan, Dr. Mandel, Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart, Dr. Lyons (alternate for Dr. Macaulay), Mr. Preston Brown, and Mr. James Kelley. Dr. Gayle Noblet and Dr. Jack Peck were visitors.

The minutes of the August 9, 1973 meeting were approved as distributed.

The following new courses and changes were approved:

Hort	613	Advanced Turfgrass Culture
Hort	661	Problems in Landscape Design (Repl Hort 660)
Hort	662	Landscape Design Implementation (Repl Hort 660)
* Bl Sc	632	Construction Equipment and Formwork
* Bl Sc	675	Building Equipment and Systems (Repl Arch 675)
* Bl Sc	676	Building Equipment and Systems (Repl Arch 676)
Engl	648	American Humor
Bot	611	Introductory Mycology (Repl Bot 651)
Bot	811	Advanced Mycology I (Repl Bot 802)
Bot	812	Advanced Mycology II (Repl Bot 802)
Bot	821	Inorganic Plant Metabolism (Repl Bot 811)
Bot	822	Organic Plant Metabolism (Repl Bot 812)
Deletion of Bot 822 Plant Taxonomy II		
Bot	823	Plant Growth and Development (Repl Bot 813)
Bot	824	Mode of Action of Growth Subst. (Repl Bot 814 - number change only)
Bot	831	Advanced Plant Taxonomy (Repl Bot 821)
Ch	636	Spectroscopy Laboratory (Repl Ch 628)
Ch	821	Organic Chemistry I (Repl Ch 823)
Ch	822	Organic Chemistry II (Repl Ch 823)

\* Dean Schwartz directed that the record show that the approval of these courses does not constitute or authorize any students to designate these as his major or minor since there is no graduate program in this area of study.

The following course was administratively approved by Dean Schwartz:

Math 865 Calculus of Finite Differences

The following course was not approved:

ECE 669 Computer Applications for Nonengineers

GRADUATE COUNCIL MINUTES, SEPTEMBER 14, 1973 (Continued)

The following courses were tabled pending approval of the proposed program in Community and Rural Development by the Commission on Higher Education:

CRD 611 Investment in Human and Natural Resources  
CRD 612 Regional Economics and Development Policy

The following course was withdrawn to be considered at the next meeting:

Arch 859 Terminal Project

Dr. Gauthreaux, chairman of the subcommittee reviewing the proposed Master of Science in Wildlife Biology Option in Marine Biology program, discussed the committee's recommendations. Dr. Gayle Noblet was available for questions relative to this program. A motion was made, seconded, and passed that these recommendations be accepted as information, and that a resolution be drafted regarding this program and others of similar nature to be discussed at the next meeting.

A subcommittee consisting of Dr. Dysart, Chairman, Dr. Gahan, Dr. Mandel, Dr. Freeze, and Mr. Preston Brown was appointed to review a proposed Doctor of Education program.

Dr. Lyons made a report concerning the findings of the Language subcommittee and made the following motion: That the University language policy for PhD's be discontinued and that each college be allowed to establish language requirements for their individual programs. Since time did not permit complete discussion at this meeting, an alternate motion was made for agreement in principle that the present PhD language requirement be revised. This motion was seconded and approved. The matter will be placed on the agenda for the next meeting.

A motion was made, seconded, and approved to adjourn.

CONTINUING ENGINEERING EDUCATION

The department of Environmental Systems Engineering and the South Carolina Department of Health and Environmental Control are sponsoring a workshop, Nov. 1, on the upgrading of the performance of sewage lagoons. Linvil G. Rich (Prof) will conduct sessions on the anatomy and design of lagoons, purification mechanisms and lagoon performance.



MINUTES OF UNIVERSITY SCHEDULE COMMITTEE, OCT. 4, 1973

The Schedule Committee met in Room 118, Brackett Hall with the following present: K. N. Vickery (Chairman), R. P. Ashworth, W. L. Ball, L. H. Brown, J. M. Cool, J. H. Couch, C. C. Davis, R. C. Grant, R. C. Harshman, J. Alex Iash, Louis Henry, John LaGrone, H. G. Lefort, F. L. Roberts, C. M. McGee, J. M. McHugh, R. F. Nowack, Julia Higgins, E. B. Rogers, J. R. Salley, J. L. Mooneyhan, R. C. Turner, J. C. Hubbard, Jr., Alan B. Laughlin, E. R. Baker, J. R. Ingram, J. C. Harden.

The Chairman reported that an Ad Hoc Committee consisting of L. H. Brown, R. C. Harshman, H. D. Adams, Louis Henry, E. B. Rogers, C. C. Davis, Julia Higgins, R. P. Ashworth, and H. S. Min had met on Oct. 2 to consider a request for special scheduling from the College of Nursing and a suggested change in the weekly schedule pattern from the Department of Psychology. The Chairman reported that the Ad Hoc Committee recognized the special schedule requirements of the College of Nursing and agreed to meet the needs of the students in that College for courses outside the College wherever possible. Professor Higgins of the College of Nursing asked for special consideration in scheduling Soc 311 and Psych 302. The Committee accepted this consensus report as information.

Dr. Harshman reported for the Ad Hoc Committee on the Psychology Department request for extensive use of 75-minute classes and restrictions on periods when laboratories could be scheduled. It was noted that variations of this type of schedule were considered in great detail before the adoption of the present schedule pattern and modifications had been considered at intervals since that time. Various members pointed out the impossibility in some areas of scheduling all laboratories as suggested and other representatives stated continuing objections to 75-minute classes, particularly on the freshman and sophomore levels. It was moved and seconded that the present pattern of class schedules be continued. The motion passed.

The Committee adopted the following schedule calendar:

September 27	Schedule Booklet materials to departments
October 11	Revised Schedule Booklet materials returned by departments
October 18	Schedule Booklet copy to printer
November 1	Publish examination schedule
November 12-16	Pre-registration day (Faculty available Nov. 13, 14, 15)
November 19	Pre-registration planning report to departments
December 21	Final scheduling run for Spring Semester
January 7	Orientation new students
January 8	Registration
January 8	Cancel student computer schedules which remain at 4:30 p.m.
January 9	Late registration
January 16	HEW and CHE data submitted as of this date

MINUTES OF AUDIO-VISUAL COMMITTEE, SEPT. 11, 1973

Present: Michel W. Jutras, Revis M. Frye, William F. Beckwith, Samuel Wang, Joe F. Allen, William H. Durham, Julius C. Hubbard, Anita L. Alston, and Betty F. Watkins.

The meeting was called to order at 3:00 p.m. by Chairman Jutras. Minutes of the May meeting were read, corrected and approved.

Chairman Jutras welcomed new members and reviewed appointment expiration dates of the committee membership as follows: Opal S. Hipps, 1976; Revis M. Frye, 1974; William F. Beckwith, 1974; Samuel Wang, 1976; Betty P. Watkins, 1975; Julius C. Hubbard, 1975; Joe F. Allen, 1974; Michel W. Jutras, 1975; Edmond L. Wall, 1976; Anita L. Alston, 1974; and Leroy Todd, 1974.

Chairman Jutras called for old business. Dr. Beckwith reported the revised information services brochure regarding services of the University Communications Center has been forwarded to Mr. Durham. Mr. Durham stated he had received the information and his staff is presently in the process of securing pictures for the brochure.

Chairman Jutras called for a report regarding the Audio Visual Aid Survey. Mrs. Watkins reported that Dr. Douglass has forwarded the survey materials to her. Mrs. Watkins will review the materials and bring the committee up-to-date on the survey at the October meeting.

Chairman Jutras called on Mr. Hubbard regarding the committee charged with looking into AV instruction. Mr. Hubbard remarked that the program conducted by Mr. Durham earlier in the day was a very good beginning. Much discussion followed. Mr. Durham brought the group up-to-date on the status of an "Instructional Media Wall." He stated that several companies have indicated an interest in providing demonstration equipment. Space and manpower are prime considerations at this time. The general concensus of the group was the need to press strongly for Audio Visual facilities in the new continuing education center.

Chairman Jutras called attention to the accomplishments of the committee for the past two years - these included:

1. Visits to the administration to secure needed space - this need was partially met.
2. Committee membership had been broadened by the addition of one undergraduate and one graduate student representative.
3. A description of the make-up and duties of the committee had been developed and printed in the Faculty Manual.
4. Co-sponsored bag luncheon seminars.

MINUTES OF AUDIO-VISUAL COMMITTEE, SEPT. 11, 1973 (Continued)

5. Surveyed all department heads regarding audio visual courses and made recommendations for courses.
6. Recommended staffing and equipping of a centralized loan center.
7. Preparation of a brochure informing all faculty of services of Communications Center nearing completion.
8. Conducted survey of all departments to determine availability and types of hardware and software currently available.
9. Sponsored Audio Visual equipment display in cooperation with the American Chemical Society.
10. Co-sponsored "Instructional Media" presentation in cooperation with the Engineering Effective Teaching Committee.
11. Recommended the development of a demonstration sound/slide presentation.
12. Recommended the development of a Demonstration Teaching Wall in the Communications Center.
13. Secured source lists of Audio Visual Software.

Dr. Jutras called for new business. The main item of business was the election of a chairman and secretary.

Mr. Sam Wang was nominated by Dr. Beckwith to serve as chairman for the coming year. Mr. Wang was elected by acclamation.

Mr. Edmond Wall was nominated by Mrs. Watkins to serve as secretary. Mr. Wall was elected by acclamation.

Chairman Jutras commended the committee members for their interest and assistance during his term and turned the meeting over to the new chairman. Mr. Wang will ask the secretary to poll committee members in an effort to determine a convenient meeting date.

Mr. Hubbard moved that the committee go on record for commending the effective and professional way in which Dr. Jutras had served in his capacity as Chairman for the past two years. Dr. Beckwith seconded the motion. The committee voted unanimously in favor of the motion commending Dr. Jutras for his efforts.



MINUTES OF THE UNIVERSITY LIBRARY COMMITTEE, SEPT. 10, 1973

Present: Dean C. B. Green, Ralph E. Knowland, Hewitt D. Adams, Harriet Crim, Furman R. Gray, Anne L. Harshman, Julia Taylor (for Ursula A. Holahan), Gordon E. Howard, John R. Ray, Kenneth J. Russo, Donald B. Stafford, J. W. Gordon Gourlay.

1. Minutes of the meeting of April 9 had been approved as distributed.
2. Mr. Ralph E. Knowland, Chairman 1972-73, conducted the election of officers and reviewed the work of the Committee, 1972-73.
3. Dr. John R. Ray was elected chairman and Mr. J. W. Gordon Gourlay secretary. The decision was made that committee meetings continue to be held at 3:30 p.m., the second Monday of each month.
4. Dean Green commented on the importance of the University Library Committee and its role in the University. He spoke of the Administrative Guidelines for the Establishment and Operation of Branch Libraries which had been recommended by the Library Committee in 1972-73 and noted that these Guidelines had been approved by the Educational Council. He read portions of a recent report which had been submitted by the Director of the Library to the Southern Association. This report indicated progress that had been made since the institutional self-study and subsequent visit by a Committee of the Southern Association. One of the recommendations of this Visiting Committee was as follows:

Budget

"It is recommended that the book budget proposals set forth in the Self-Study report be implemented as rapidly as possible. It must be remembered that these proposals represent minimum standards, and that they are long overdue if any sound graduate study is contemplated."

The library reported as follows:

Good progress has been made in implementing the recommendations made in the self-study report.

Quantitatively speaking the total library budget has increased from \$722,197 in 1970-71 to \$1,167,489 budgeted for fiscal year 1973-74. In the same period the amount specifically budgeted for books and periodicals and similar library materials increased from \$278,660 to \$550,000. This 1973-74 figure does not include income for the purchase of books from a \$165,000 endowment fund received last year nor does it include some \$12,000 from other sources.



MINUTES OF THE UNIVERSITY LIBRARY COMMITTEE, SEPT. 10, 1973 (Continued)

The book collection has increased from 450,000 in June of 1971 to 507,000 in June of 1973. This figure does not include the addition of 931 reels of microfilm or 51,496 units of microfiche which have been acquired since the self-study. Also an additional 1,148 serial titles are being received.

Good progress has been made also in implementing other recommendations of the self-study.

Dean Green observed that this report reflected the strong support which the library has received from the University Administration.

He spoke briefly of the William J. Latimer bequest of approximately \$165,000 which has been made a permanent endowment fund from which books and other library materials will be purchased.

In conclusion Dean Green noted that this year is the first time in the history of the University where the total library budget has exceeded a million dollars.

6. A discussion took place as to the advisability of having a chairman elected for the University Library Committee before its first meeting in September, possibly the last meeting of the academic year. No action was taken.
6. Mr. Gourlay pointed out a number of important policies that had been recommended by the Library Committee since 1960 and which had been approved by the Administration. He stressed the importance to the library of this Committee. Since the library served a student body of nearly 10,000 and a faculty and staff of more than 700 and maintained its service day and night seven days a week, it was very important to have a committee representing the faculty and students that could be kept informed of library affairs, provide counsel and assist in the formulation of policy.
7. Time of next meeting, Monday, October 8, 3:30 p.m.

BIOCHEMISTRY

G. L. Powell (Assoc Prof) presented a paper at the annual regional Lipid Conference at Oak Island, N. C., entitled "Triple-label Scintillation Radioassay: Possible or Impossible?" on Oct. 5. Co-authors were J. F. Geldard (Assoc Prof, Chemistry) and John Rogers (Grad Stu, Botany).

## CERAMIC ENGINEERING

Hugh H. Wilson (Prof) presented the A. I. Andrews Memorial Lecture at the 35th annual PEI Technical Forum at Ohio State University, Oct. 31. Drawing on his experiences during a year at the EPA's Research Triangle (NC) facilities, he will examine the tightening controls on water, air, and solid waste contaminants and outline a program for industry to consider as it responds to environmental demands.

## CHEMICAL ENGINEERING

F. C. Alley (Prof) spoke about "Industrial Hygiene - What's Happening in Education" at the 36th annual South Carolina Occupational Safety Conference in Columbia, Oct. 4-5.

D. F. Bruley (Prof) will be listed on the Instrument Society of America (ISA) list of "Distinguished Speakers on Instrumentation, 1973-1974."

D. F. Bruley discussed "Modern and Classical Control Theory in Systems Physiology" at an informal meeting on systems physiology at the Medical University of South Carolina, Sept. 15.

D. F. Bruley has been given a nontenured appointment of visiting professor of systems physiology at the Medical University of South Carolina.

D. F. Bruley presented "A Hybrid Computer Nonlinear Monte Carlo Model for Oxygen Transport in the Brain Microcirculation" at the fall meeting of the south eastern region of the Society for Computer Simulation, Redstone Arsenal, Ala., Sept. 21, with D. H. Hunt (Univ Ark), H. I. Bicher (Univ Ark) and M. H. Knisely (Med Univ of Charleston).

D. F. Bruley has published "Studies of Cerebral Tissue Oxygenation and Related Autoregulation" in the Advances in Chemistry Series of the American Chemical Society in Chemical Engineering in Medicine, Vol. 118, pp. 290-302 (1973) with M. H. Knisely, H. I. Bicher, and D. D. Reneau (La Tech).

## CHEMISTRY

Recent Publication: David Stanford (Grad Stu) and A. L. Beyerlein (Assoc Prof), 'End Effects' in Thermogravitational Thermal Diffusion. Thermal Diffusion Factors for the Carbon Tetrachloride-Cyclohexane System, J. Chem. Phys. 58, 4338 (1973).

MATHEMATICAL SCIENCES

James A. Reneke (Assoc Prof) has had the following article published:  
 'Continuity for Stieltjes-Volterra integral equations,' Rev. Roum. Math. Pures et Appl., No. 3, Vol. 17, (1972) p. 389.

Anil K. Bose (Assoc Prof) has had the following article published:  
 'On linear differential equations with constant coefficients,' Amer. Math. Monthly, Vol. 78, No. 8 (October 1971) p. 896.

Andrew Sobczyk (Samuel Maner Martin Prof) has had the following articles published recently: "Eight Blocks - Fascinating Solution of a Frustrating Puzzle," Amer. Math. Monthly, Vol. 80 (1973) p. 104. "More Progress to Madness via Eight Blocks'," Mathematics Magazine, Vol. 46 (1973) p. 180.

W. H. Ruckle (Prof) gave an invited lecture entitled, "The classification of normed spaces by means of absolutely convergent series" as part of the Sequence Space and Summability Day program on Oct. 12 at York University in Toronto, Canada.

PHYSICS AND ASTRONOMY

The Department of Physics and Astronomy is pleased to announce the visit of Lunar Explorer Charles M. Duke on Nov. 15. Astronaut Duke hails from Lancaster, S. C. and made many contributions to the space projects of NASA. He is internationally known for successful moon landing and exploration of Apollo-16 mission. Astronaut Duke is the recipient of numerous distinguished honors such as NASA Distinguished Service Medal, the JSC Certificate of Commendation (1970), the Air Force Distinguished Service Medal and Air Force Senior Pilot Astronaut Wings, the SETP Iven C. Kincheloe Award of 1972, the AAS Flight Achievement Award for 1972, the AIAA Haley Astronautics Award for 1973, and the Federation Aeronautique Internationale V. M. Komarov Diploma in 1973, and named South Carolina Man of the Year in 1973.

Tentative program for Astronaut Duke is as follows: Nov. 15, 3:00 p.m. - 101 Kinard Lab - A Seminar talk, technical in nature. 4:30 p.m., Alumni Hall - Informal reception. 8:00 p.m., Brackett Hall - A general talk about lunar exploration.

J. R. Ray (Assoc Prof) published a paper in the American Journal of Physics, Oct. 1973, Vol. 41, p. 1188 entitled "Modified Hamilton's Principle."

C. W. Ulbrich (Assoc Prof) and David Atlas, Boulder, Colo. had a paper entitled "The Fine Scale Structure of Precipitation and EM Propagation" presented at the Inter-Union Commission on Radio Meteorology Colloquium in Nice, France, Oct. 23-31.

November 1, 1973  
CALENDAR OF CAMPUS EVENTS

- 1 -- Clemson University Woman's Club, Clemson House, 3:45 p.m.
- 1 -- Flemmy Competition (Department of Languages)
- 2 -- Real Time Computing Seminar: Dr. Robert Vichnevetsky of Rutgers University on "Hybrid and Digital Methods for the Solution of Partial Differential Equations -- with Applications," Lowry Auditorium, 1:30 p.m.
- 3 -- Football: Wake Forest, here, 1:30 p.m.
- 3 -- Chicken Barbecue (Alpha Tau Alpha and Society for the Advancement of Agricultural Education), Littlejohn Coliseum, 10:30-1 p.m.
- 4 -- Soccer: South Florida, here, 2 p.m.
- 5 -- Speech Night, Daniel Auditorium, 7 p.m.
- 5 -- Agronomy Conference: "The World Bank's Fertilizer Projects," A-203 P&AS Bldg., 9:05-11:15 a.m.
- 5 -- Slide Show and Evening Lecture: Professor James Washburn and Professor and Mrs. Kenneth Carpenter, College of Architecture will show slides and discuss their recent trip to the USSR
- 6 -- Speakers Bureau: Christine Jorgensen, Tillman Auditorium, 7 p.m.
- 7 -- Chemical Engineering Colloquia Series: J. Peter Clark, Assistant Professor of Chemical Engineering, Virginia Polytechnic Institute & State University, "Dihydrochalcones: New Sweeteners from Citrus Wastes," Earle Hall, 4 p.m.
- 7-30 -- College of Architecture Exhibition: "James Mills -- One Man Exhibit," first in a series of yearly exhibitions from graduate schools in the Southeast featuring painters, sculptors, printmakers and photographers, Lee Gallery
- 9 -- JV Football: Georgia Tech, here, 2 p.m.
- 10 -- Declamation Contest (Department of Languages)
- 12 -- French Film, Daniel Auditorium, 7 p.m.
- 12 -- Professor Paul Davidoff, AIP, Director of the Suburban Action Institute, New York City, and author of Domestic Land Reform, A Choice Theory of Planning, and Suburban Action: Advocate Planning for an Open Society, speaking on Advocacy Planning. Afternoon discussion in City and Regional Planning Studio and evening lecture, Lee Hall
- 13 -- Chemistry Seminar: Dr. M. Raban of Wayne State University on "Stereochemistry of Trivalent Nitrogen Compounds," Room 131 Brackett Hall, 4:45 p.m.



November 1, 1973

CALENDAR OF CAMPUS EVENTS Continued

- 13 -- Short Course: "Designing with Wood"
- 17 -- Play: "The Importance of Being Earnest" by Oscar Wilde, presented by the Clemson Players drama troupe, Daniel Auditorium, 8 p.m.
- 14 -- Workshop on Upgrading the Performance of Sewage Lagoons, Room 302 Rhodes Engineering Research Center
- 14 -- Seminar: Dr. Joseph C. Purcell, University of Georgia, on "Prospects for Meat Prices," presented by Department of Agricultural Economics and Rural Sociology, Room 1, Kinard, 3 p.m.
- 14 -- Agronomy Conference: "Interpretation of Soil and Plant Analyses for Determining Lime and Fertilizer Needs," A-203 P&AS Bldg., 9:05-11:15 a.m.
- 14 -- Fort Hill Quarterback Luncheon, Clemson House, 12 noon

### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

CLEMSON UNIVERSITY LIBRARY  
Vol. 13 No. 7 SOUTH CAROLINA ROOM

November 15, 1973

NOV 15 1973



**IN APPRECIATION** — President R.C. Edwards presents a gavel and pounding block made from walnut wood cut on Fort Hill Plantation to the Honorable Rex Lyle Carter, Speaker of the S.C. House of Representatives, as Mrs. Carter looks on. The presentation was made in appreciation for the services Carter has rendered to the people of South Carolina at the Government Weekend Dinner at Clemson October 26.

Clemson joined in partnership with the South Carolina Textile Manufacturers Association, the Textile Hall Corporation, and the legislative delegations from Anderson, Greenville, Oconee, Pickens and Spartanburg counties in sponsoring the weekend which focused attention on man's basic needs: food, clothing and shelter.

## The Energy Crisis:

Statement by President Robert C. Edwards

The seriousness of the nation's energy crisis was clearly placed before the American people by President Nixon in his recent address.

The President stressed the problem is critical and will not be of short duration. He recommended voluntary conservation measures in several specific areas and requested the full cooperation of everyone.

Clemson University will comply in good faith with all guidelines issued at the federal and state levels.

We have designated Mr. Roy Rochester, Director of physical plant operations, to assume the additional responsibilities as the official University energy conservation officer.

Also, the University already is establishing committees to adopt University guidelines for energy conservation; one committee will plan steps to be undertaken and another group will implement and monitor the program.

The committees will be composed of representatives from all segments of the University, including student representation.

It will require the full cooperation of the entire University family during this difficult time. I am confident this cooperation will be extended as it has been in the past.

University guidelines on energy conservation will be made available to the University family as soon as they are established. In the meantime, I urge everyone to please discount any rumors that may arise concerning the University's energy policy."

## Hendricks Will Head Nutrition Committee

Clemson University nutritionist Dr. Donald Hendricks has been named chairman of a reorganized South Carolina Nutrition Committee that will try to promote better nutritional standards in the state.

The group had been activated as a part of a national effort in the 1940's but had operated on a limited basis in recent years.

Gov. John West has signed a statement re-constituting the committee and endorsing its programs.

An increasing amount of malnutrition through snacking and poor buying habits "and an alarming lack of awareness of the need for good basic human nutrition" led to the reorganization, according to Hendricks.

Dr. John Zemp of the S.C. Medical College of Charleston was named vice chairman, and Mrs. Marie Hindman of the Clemson Extension Service, secretary-treasurer.

Membership is drawn from agencies and organizations in the state involved in programs dealing with nutrition. Coordinating information and programs will be one of the aims of the committee, according to Hendricks, along with "general promotion of better standards in an area where attention is very much needed right now."

Assisting county nutrition committees and presentation of an annual statewide nutrition conference will be among the goals.

## Criteria Announced For Master Teacher Award

The Criteria Committee of the Student Alumni Council met last Spring and proposed the following guidelines in regard to selection of the recipient of the Alumni Master Teacher Award:

- (1) cannot be a current Alumni Professor.
- (2) must have been on the faculty of Clemson University for the previous three
- (3) full academic years.

- (3) can be the recipient of the award on once.
- (4) sixty (60) percent of the nominee's classes must be on the undergraduate level.
- (5) no restriction by degree.
- (6) no age requirement.

These guidelines were approved by the Vice President for Student Affairs and the Vice President for Academic Affairs.

Nominations may be made by any student, faculty or staff member and should be mailed to the Student Alumni Council, in care of the Clemson Alumni Association. Nominations will not be carried over from year to year. This Committee will review the nominations, select ten (10) for presentation to the full Student Alumni Council for their selection of this year recipient.

In regard to deadline dates:

- (1) nominations must be submitted by January 1st of each year to the Student Alumni Council.
- (2) this committee will make its presentations of the above mentioned ten nominees by February 1st of each year.
- (3) the entire Student Alumni Council will make its selection by April 1st of each year.
- (4) the Award will be presented at the Commencement Exercises each year.

Below is an official form for nominating the professor that you feel is deserving of this honor. A \$1,000.00 cash award will be presented to the Alumni Master Teacher at the Commencement Exercises in May of 1974. The cash award is provided by the Clemson Alumni Association, and is made possible by a grant from the Alumni Loyalty Fund.

## NOMINATION FOR ALUMNI MASTER TEACHER

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Department: \_\_\_\_\_



## Music Department Announces Chamber Music Series Schedule

Clemson University's music department has announced its program schedule for the 1973-74 Chamber Music Series. All the programs are at 8 p.m., open to the public at no charge, in Daniel Hall Auditorium. Light refreshments will be served in a "meet the artists" reception following each program in the reception lounge of Strode Tower.

Concerts in the series include:

-- Dec. 6, clarinetist Edmund Winston and pianist Lillian Harder playing selections by Debussy, Bernstein, Bossa and Schuman.

-- Jan. 18, soprano Doris Hill and tenor Robert Hill featured in a complete performance of Menotti's one-act opera "The Telephone," along with art-songs and arias. Assisted by flutist Marilyn Austin.

-- Feb. 28, tenor Joseph E. Jackson in a program of art-songs by Schubert, Dvorak (the "Biblical Songs"), and Vaughan Williams (the "Mystical Songs"), and arias by Handel.

-- March 29, faculty recital featuring various members of the music department.

## "Egg Decorating" May Be Ordered Through University Bulletin Room

The making of Christmas tree ornaments has become a year-round hobby for many who think handmade decorations, lovingly crafted, add special meaning to the annual celebration.

Faculty and staff who are hobbyists will find a new publication from Clemson University helpful in seeking new and different ways to express their creativity.

Dr. B.D. Barnett, head of the poultry science department at Clemson, has authored a beautiful and informative pamphlet describing the art of "Egg Decorating."

Barnett says, "Egg decoration originated in pre-Christian times, having been well-established in China as early as 722 B.C. Symbolic of the Resurrection, the egg has been connected with the Christian celebration of Easter for many centuries.

"In recent years, the hobby of egg decorating has spread to Christmas. Eggs may be dyed, gilded, decoupaged, collaged or laquered. Portions may be removed and small scenes set inside. Loops of braid or other hangers may be attached at the top of the decorated ovals in order that they may hang from the branches of the tree. Or they may be set on small bases or stands for centerpieces or place favors for extra special guests."

The brochure gives techniques for see-through, hinged-door or picture window eggs. Suggestions for preparing, cutting and ornamenting are included.

"If craftsmen find their Christmas eggs particularly pleasing," says Barnett, "they should enter them in the 'Egg and Art' exhibition usually held at Clemson during the Easter season. Entrees from artists of all ages are welcomed."

The pamphlet, "Egg Decorating," is a miscellaneous publication of the S.C. Experiment Station and may be obtained by calling the Clemson University Bulletin Room at 3261.

## Starkey Re-elected President Of Clemson Alumni Association

Lawrence V. Starkey of 1025 Riverbend Club Dr., N.W., Atlanta, has been re-elected president of the Clemson Alumni Association and the Alumni National Council. He is the youngest alumnus ever to be elected to the office.

Starkey, a 1956 graduate of Clemson University, is employed as a senior attorney with the U.S. Treasury Department in Atlanta.

Virgil Linder of Columbia, S.C., was re-elected vice president by the Alumni National Council.

### Textile Award Established To Honor Former Professor

A new memorial award to recognize an outstanding undergraduate student each year in the department of textiles has been established at Clemson University.

The Robert Knight Eaton Textile Award, named in honor of a former professor and head of the carding and spinning department and acting dean of the Clemson School of Textiles, will consist of a \$100 savings bond and a certificate.

The award is made possible through a permanent endowment gift of \$2,000 to the Clemson University Foundation from Dr. and Mrs. Howard L. Hunter of Clemson. Mrs. Hunter, the former Roxana Eaton, is the daughter of the late Prof. Eaton.



Prof. Eaton

Prof. Eaton began his teaching career at Clemson in 1923 as professor of weaving and designing, and the following year became professor of carding and spinning. He was a native of Providence, R.I., and was a 1905 graduate of Bowdoin College. He did graduate work at the Philadelphia Textile School and Lowell Textile Institute.

In 1943, Prof. Eaton was appointed acting dean of the School of Textiles. He retired in 1949 after 26 years of service to Clemson.

"The Alumni Associations of Clemson and the University of South Carolina are jointly sponsoring a Tea Dance-Buffer immediately following the Clemson-Carolina game in Columbia on November 24. The occasion will be held at the Carolina Inn and cost for both the tea dance and the buffet will be \$4.50 per person. It is not necessary to make reservations."

MINUTES OF THE UNDERGRADUATE COUNCIL, OCTOBER 5, 1973

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Lamar H. Brown, Bingham M. Cool, Arline M. Duvall, James C. Fanning, Jerome V. Reel, John H. Rodgers, David L. Rowe (Student Representative), Malcolm J. Skove, Rodney M. Sprott (Student Representative), Edward A. Vaughn, Kenneth N. Vickery, and Frank A. Burtner (Visitor).

The minutes of the September 7, 1973 meeting were approved as distributed.

PrePharmacy Curriculum

Dr. Frank Burtner presented to the council a rationale for proposed changes in the PrePharmacy curriculum. Following the discussion of the proposal there was a motion and second to accept the curriculum change for PrePharmacy (see attached).

Resolution on Optional Final ExaminationsResolution Prescribing Grade Point Ratio for Graduates in Major

The council will meet as the committee to consider these resolutions. A meeting to consider Optional Final Examinations is set for Friday, October 12, 1973 from 3:00 P.M. to 4:30 P.M. Place is not yet designated.

Sub-committee on Awarding a Second Baccalaureate Degree

Dean Kenneth Vickery was appointed chairman of the Sub-committee on Awarding a Second Baccalaureate Degree. Other committee members will be appointed later.

Committee on Improvement of Undergraduate Teaching

Dr. Spurgeon Cole was appointed chairman of the Committee on the Improvement of Undergraduate Teaching.

College of Agricultural Sciences

The following new courses and course changes were approved:

An Sc	202	Introduction to Animal Science, 3 cr (2 and 3).
Fd Sc	201	Man and His Food, 2 cr (2 and 0).
Fd Sc	431	Food Processing, 2 cr (2 and 0).
Fd Sc	432	Food Processing, 2 cr (2 and 0).
Fd Sc	433	Food Processing Laboratory, 2 cr (1 and 3).
Fd Sc	434	Food Processing Laboratory, 2 cr (1 and 3).

MINUTES OF THE UNDERGRADUATE COUNCIL, OCTOBER 5, 1973 (Continued)College of Education

The following new courses and course changes were approved:

AS	209	Growth and Development of Aerospace Power, 1 cr (1 and 1).
AS	210	A Quarter Century of Aerospace Power, 1 cr (1 and 1).
AS	309	Contemporary National Security, 3 cr (3 and 1).
AS	310	Contemporary National Security Policy, 3 cr (3 and 1).
InEd	435	Advanced Industrial Metalworking Practices, 3 cr (2 and 3).
InEd	440	Advanced Techniques of the Graphic Arts, 4 cr (2 and 4).

The following courses were referred to the University Schedule Committee to determine feasibility of course changes:

MS	101	Fundamentals (Basic), 1 cr (2 and 1).
MS	102	National Defense (Basic), 1 cr (2 and 1).
MS	201	Introduction to Operations and Basic Tactics and Map and Aerial Photograph Reading (Basic), 1 cr (2 and 1).
MS	202	American Military History (Basic), 1 cr (2 and 1).

College of Engineering

Approval of proposed Agricultural Engineering Curriculum was requested. There was a motion and second to accept the proposal; motion passed. (See attached).

The following new courses and course changes were approved:

AgE	353	Computational Systems, 2 cr (1 and 3).
AgE	364	Agricultural Waste Management Systems, 2 cr (2 and 0).
AgE	433	Design Criteria for Plant and Animal Environment, 2 cr (2 and 0).
AgE	465	Engineering Properties of Biological Materials, 2 cr (1 and 3).
E&CE	307	Basic Electrical Engineering, 3 cr (2 and 2).
BioE	233	Introduction to Engineering in Sports, 3 cr (3 and 0).
ChE	454	Physiological Control Systems, 3 cr (3 and 0).
ESE	401	Environmental Engineering, 3 cr (3 and 0).

The following proposed curriculum, new courses and course changes were approved with the provision that the Mechanical Engineering Department Head clear up the discrepancies regarding co-requisites as they appear in the course descriptions and proposed curriculum, and report action to Dean Green.

Proposed Mechanical Engineering Curriculum

ME	313	Instrumentation and Measurements, 3 cr (2 and 3).
ME	400	Dynamic Systems Analysis and Control, 4 cr (3 and 3).
ME	402	Innovative Design III, 3 cr (2 and 3).
ME	412	Thermal Systems, 3 cr (3 and 0).
ME	413	Thermal Systems Laboratory, 1 cr (0 and 3).
ME	414	Mechanical Systems Laboratory, 1 cr (0 and 3).



MINUTES OF THE UNDERGRADUATE COUNCIL, OCTOBER 5, 1973 (Continued)College of Industrial Management and Textile Science

The following new courses, course changes, and curricula alterations were approved:

IM 299 Computer Programming I, 1 cr (0 and 3).

Industrial Management Curriculum (see attached)

Bachelor of Science in Accounting (see attached)

B.S. in Financial Management (see attached)

Textile Science Curriculum (see attached)

Textile Chemistry Curriculum (see attached)

College of Liberal Arts

The following new courses, course changes, and curriculum changes were approved:

Engl 223 Folklore, 3 cr (3 and 0).  
 Engl 313 Discussion and Group Leadership, 3 cr (3 and 0).  
 Engl 414 Medieval Drama, 3 cr (3 and 0).  
 Phil 201 Introduction to Philosophic Problems, 3 cr (3 and 0).  
 Phil 202 Introduction to Logic, 3 cr (3 and 0).  
 Phil 203 Philosophy and Current Issues, 3 cr (3 and 0).  
 Phil 304 Moral Philosophy, 3 cr (3 and 0).  
 Phil 325 Philosophy of Science, 3 cr (3 and 0).  
 Phil 344 Current Ethical Theory, 3 cr (3 and 0).  
 Phil 422 Mathematical Logic, 3 cr (3 and 0).  
 PolSc 429 American Politics and Education, 3 cr (3 and 0).  
 PolSc 453 American Political Thought, 3 cr (3 and 0).  
 Psych 494 Topical Seminar in Social Psychology, 3 cr (3 and 0).  
 Psych 497 Directed Studies in Psychology, 2 cr (2 and 0).  
 Soc 309 American Marriage and Family, 3 cr (3 and 0).

Curriculum change: Under "History" delete the words "24 semester credits in the social sciences and philosophy at the 100-200 level, including,"

College of Physical, Mathematical and Biological Sciences

The following new courses, course changes, and curriculum were accepted:

Bot 413 Phycology, 3 cr (2 and 3).  
 Bot 421 Plant Physiology, 4 cr (3 and 3).  
 Bot 441 Plant Ecology, 3 cr (2 and 3).  
 Bot 451 Plant Anatomy, 3 cr (2 and 3).  
 CpSc 440 List Processing, 3 cr (3 and 0).  
 CpSc 460 Peripherals and File Design, 3 cr (3 and 0).  
 CpSc 462 Design of Data Management Systems, 3 cr (3 and 0).  
 Math 350 Introduction to Mathematical Models, 3 cr (3 and 0).  
 Micro 415, H415 Microbial Genetics, 4 cr (3 and 3).  
 Phys Sc 301 Concepts in the Physical Sciences for Elementary School Teachers, 3 cr (3 and 0).

MINUTES OF THE UNDERGRADUATE COUNCIL, OCTOBER 5, 1973 (Continued)

Phys 240            Physics of the Weather, 3 cr (3 and 0).  
Phys 457            Basic Health and Radiological Physics I, 3 cr (3 and 0).  
Phys 458            Basic Health and Radiological Physics II, 3 cr (3 and 0).  
Zool 302, H302    Vertebrate Embryology, 4 cr (3 and 3).

Microbiology Curriculum, Proposed Molecular Biology Option Approved  
(see attached)

The following courses and curriculum were held back for editing, clarification etc. by the respective college representatives:

FdSc 425            Nutrition and Dietetics  
InEd 418            Technological Concepts in Manufacturing  
InEd 415            Construction Practices  
InEd 313            Arts and Crafts  
InEd 312            Metal Processes  
InEd 460            Introduction to Career Education  
RPA 308            Leadership and Group Processes in Recreation  
Ch 101             General Chemistry

Medical Technology Curriculum

MINUTES OF THE UNDERGRADUATE COUNCIL, OCTOBER 12, 1973

The Undergraduate Council held an open meeting in Room 114 Kinard Laboratory of Physics. The following members were present: Dean Claud B. Green (Chairman), Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Ralph K. DeHaven, Arline M. Duvall, Ralph W. Gilchrist, Jerome V. Reel, David L. Rowe (Student Representative), Malcolm J. Skove, Rodney M. Sprott (Student Representative), Edward A. Vaughn, and Kenneth N. Vickery.

The following new course was approved:

RPA 308    Leadership and Group Processes in Recreation, 3 cr (3 and 0).

Dean Green recognized Dr. John D. Fulton, President of the Faculty Senate, who explained the Faculty Senate Resolution on Optional Final Examinations. (A copy of the resolution is attached.)

Dr. William F. Steirer, Jr., presented the rationale for the resolution and spoke in favor of its passing.

A statement against the passing of the resolution was given by Dr. Reel.

After considerable discussion Dr. Vaughn moved that the resolution not be approved as currently written. The motion was seconded by Dr. Cool and was approved by a vote of eight (8) to three (3). There were two (2) abstentions.

RESOLUTION ON OPTIONAL FINAL EXAMINATIONS (FS-73-6-1)

WHEREAS, Part IV of the Scholastic Regulations Section, the paragraph titled Semester Grades on page 101 of the Clemson University Announcements now stipulates:

The standing of a student in his work at the end of a semester is based upon daily classwork, tests or other work, and the final examinations. Faculty members may excuse from the final examinations all students having the grade of A on the work of the course prior to the final examination, but for all other students written examinations are required in all subjects at the end of each semester, except in certain laboratory or practical courses in which final examinations are not deemed necessary by the department faculty.

Now therefore, BE IT RESOLVED that said paragraph titled Semester Grades be replaced by:

The standing of a student in his work at the end of a semester may be based upon daily classwork, tests or other work, and the final examinations. The individual faculty member will have the option of determining the relative weights of all work in assigning the final grade and in allowing exemptions from the final examinations. Written final examinations in any course will be discretionary with the individual faculty member.

COMPUTER ADVISORY COMMITTEE MINUTES, SEPT. 12, 1973

Present: R. F. Zant, presiding (in the absence of J. C. Peck), J. L. Clark, S. E. Cromer, J. P. Crouch, J. H. Higgins, G. Howard, R. J. Knapp, J. R. Lambert, J. S. Lytle, C. P. Monaghan, M. C. Palmer, J. L. Strom, K. N. Vickery, M. L. Wolla, and R. E. Chapel, Secretary.

The minutes of the previous meeting were approved as submitted.

The Technical Advisory Subcommittee's recommendation "that Dr. Kenelly's request for eight hard-wired ports and Center-provided security for terminals in Martin Hall adjacent to the planned remote job entry facility be granted" was amended to delete the words "and Center-provided security" and approved as amended.

The Operations Subcommittee's recommendation "that the Computer Center formulate a pricing procedure, to be used as soon as possible, which charges for usage of each component of the total Computing Facility" was approved.

The schedule and format established by Dr. Peck were approved for subsequent meetings. The committee will meet on the second Wednesday of each month at 3:30 p.m. A formal agenda will be distributed by the Friday immediately preceding the meeting; only items submitted to the chairman one week in advance of the meeting will be on the agenda; only items on the agenda will be discussed. Every effort will be made to limit the duration of the meeting to one hour.

Dr. Zant read the minutes of the latest Operations Subcommittee meeting, which include the recommendation "that modifications to the proposed accounting system be made which would minimize the variation in cost for identical work run at different times." The ensuing discussion centered on the desirability of trying the new system (which has yet to be implemented) before suggesting changes to it. A motion to approve the recommendation was not carried.

Dr. Lambert presented the following recommendation:

In the view of the Technical Advisory Subcommittee it appears that a possible unnecessary duplication of computer hardware may be forthcoming in Sikes Hall. The 360/20 computer currently housed in the Office of Business and Finance is used less than eight hours per day, five days per week. The Registrar's Office has scheduled for delivery another RJE terminal to communicate with the Computer Center.



COMPUTER ADVISORY COMMITTEE MINUTES, SEPT. 12, 1973 (Continued)

Current work on the 360/20 includes work for both the Business and Finance Office and the Office of Admissions and Registration in the form of both stand-alone jobs and RJE to the Computer Center.

In light of the current limited workload of the 360/20 we recommend that the Office of Admissions and Registration be requested to furnish the Technical Advisory Subcommittee with justification for the second RJE terminal in Sikes Hall.

The recommendation was approved.

Dr. Zant was elected chairman of the committee for the current fiscal year.

ENTOMOLOGY AND ECONOMIC ZOOLOGY

L. G. Webb (Assoc Prof) with graduate students, W. H. Fleming, John E. Frampton, Greg H. Kizer, Kenneth B. Stansell and Edmund C. Aldridge III attended and participated in the Annual Conference of Southeastern Game and Fish Commissioners in Hot Springs, Ark., Oct. 13-18.

H. A. Loyacano (Asst Prof) attended and presented a paper at the Annual Meeting, Southern Division, of the American Fisheries Society in Hot Springs, Ark., Oct. 14-17.

S. G. Turnipseed (Assoc Prof) went to Porto Allegre, Brazil to take soybean seed of insect resistant lines for planting in Brazil to obtain winter screening and seed increase and to establish working relationships with Drs. Harry Minor and Elvis Heinrichs of the Wisconsin DNPEA/USAID Project in Porto Allegre, Oct. 21-Nov. 3.

G. R. Carner (Asst Prof) and R. L. Holloway (Asst Prof) attended and participated in the Southeastern Peach Workers Conference in Raleigh, N. C., Oct. 30-31.

S. B. Hays (Prof and Hd) spoke to the Palmetto State Beekeepers Association and Southern States Beekeepers Federation on the Brazilian Bee and its potential impact should it reach the U.S., Oct. 24 at their meeting in Clemson.

### AGRICULTURAL EDUCATION

John H. Rodgers (Prof) was liaison host for a regional meeting on Community Development held at Clemson University on Nov. 14-15. The meeting is funded by the Lilly Endowment, Inc.

Lloyd H. Blanton (Asst Prof) led discussion among South Carolina's Cooperative Extension 4-H Leaders on the topic "Teaching Techniques for Large Groups." The 120 participants were attending the annual conference/workshop held at the Columbia Sheraton Sept. 25-28.

### CIVIL ENGINEERING

Subhash C. Anand (Assoc Prof) received funds from NSF to present an invited paper, "Tresca Yield Criterion in Finite Element Analysis" in Tokoyo, Nov. 5-10, to the U.S. -Japan Seminar on Finite Element Methods organized by the Japan Society of Steel Construction. The trip included visits to universities and technical institutes in Bangkok, Kanpur (India), New Delhi and Aachen and Bochum (West Germany) where he discussed his research with the schools' faculties.

Parviz F. Rad (Asst Prof) and Robert L. Schmidt of the Twin Cities Mining Research Center in St. Paul, Minn. have had the paper, "Tunnelling Machine Research - Development of an Experimental Full Scale Research Rock Cutting Device" published in the Bureau of Mines Report of Investigation #7787.

Parviz F. Rad has received notice from the Twin Cities Mining Research Center that the department of Civil Engineering will receive a \$15,000 linear cutting apparatus on indefinite loan for use in tunnel boring machine research.

Through D. B. Stafford (Assoc Prof) aerial photographs of ten S. C. counties, worth \$8,000, have been obtained from the Agricultural Stabilization and Conservation Service of the USDA.

### COLLEGE OF EDUCATION

H. F. Landrith (Dean) spoke on "The College of Education Commitment to Service" at the annual Legislative-Governors Conference on Mental Health and Mental Retardation at Hilton Head on Oct. 18.

H. F. Landrith addressed the Delegate Assembly of the South Carolina Education Association on "The NTE - Use and Misuse" in Columbia on Oct. 20.

## COLLEGE OF ENGINEERING

Dean L. C. Wilcox has announced the appointment of Dr. B. E. Gilliland to the position of Assistant to the Dean of Engineering.

Dr. Gilliland has been on the faculty of Clemson University since 1967. He has a baccalaureate degree in Chemical Engineering from Louisiana Technological University and a Ph.D. degree in Instrumental Science from the University of Arkansas.

Responsibilities associated with this position are concerned with coordination of Engineering graduate programs, development of research and other College-wide administration.

## COLLEGE OF NURSING

Geraldine Labecki (Dean) has been appointed as a member of the Medical Education Committee, South Carolina Tuberculosis and Respiratory Disease Association, term to expire in 1976.

Dean Labecki participated in the Curriculum Seminar, a special project of the Southern Regional Education Board, in New Orleans on Oct. 15-19.

Dean Labecki and Mary Wagner (Asst Prof) participated in the meeting of the Joint Practice Commission, a committee with membership from the South Carolina Nurses' Association and the South Carolina Medical Association, in Columbia on Oct. 25.

Arline Duvall (Assoc Prof) and Gwendolen Lee (Assoc Prof) participated in the Curriculum Development Project at Duke University School of Nursing on Nov. 1-2. The topic of discussion was Pediatric and School Nurse Practitioners.

Dean Labecki and Leon Roswal (Assoc Prof and Dir of Associate Degree Program) attended the meetings of the Southern Regional Education Board's Project on Nursing in Atlanta on Oct. 31-Nov. 3.

Dean Labecki participated as a member of the Manpower Expansion and Services Committee of the Regional Advisory Group, South Carolina Regional Medical Program Project Review Committee, in Columbia on Oct. 31.

The Piedmont Branch of the South Carolina Tuberculosis and Respiratory Disease Association awarded two scholarships of \$200 each to two nursing students in the Associate Degree Program on Oct. 23. Mr. Herbert McAllister, Program Director of the Piedmont Branch, presented the awards to Miss Diana Clark and Miss Gwendolyn York.

## CONTINUING ENGINEERING EDUCATION

A new seminar on "The Computer as a Resource" for the engineer or executive who began his career before courses on the computer were a part of the educational curriculum has been developed by the department of Electrical and Computer Engineering. C. W. Malstrom (Instr), R. W. Snelsire (Assoc Prof), L. C. Wilcox (Dean) and M. L. Wolla (Prof) are instructors for the short course, Nov. 28-29.

F. W. Cooke (Assoc Prof and Hd, DIS), J. J. Klawitter (Asst Prof, DIS) and A. M. Weinstein (Asst Prof, DIS) will be instructors at a conference on biomaterials for the practicing orthopedic surgeon, Nov. 29-30 in Atlanta. Conference sponsors are Emory University, Clemson University and Tulane University.

The department of Mechanical Engineering and the department of Building Science of the College of Architecture with the financial support of the office of the Governor through the South Carolina Energy Management Council have planned a one-day seminar on building design and operation for energy conservation for Nov. 30 at the Holiday Inn. R. E. Knowland (Hd, Bldg Sci) will be moderator for a panel of the day's speakers on "So What! What are the costs and benefits?"

The department of Civil Engineering and the Portland Cement Association are sponsoring a short course on the 1971 American Concrete Institute Code at Greenville TEC, Nov. 30-Dec. 1. Jack Love (Asst Prof, CE) will lead a session on flexure and alial loads.

## ECONOMICS DEPARTMENT

A "Training Manual for Solid Waste Collectors" developed by Clemson University researchers will be published and nationally distributed by the U. S. Environmental Protection Agency. The manual was developed by a research team consisting of faculty from the Departments of Economics, Textiles, Industrial Management, and Psychology. Lowell Nordquist (Instr, Econ) was the principal investigator for the development program which was supported by a contract from the US Environmental Protection Agency through the South Carolina Technical Education Commission.

Hugh Macauley (Alumni Prof) addressed the opening convocation of faculty and students at Presbyterian College on Sept. 4.

## ELECTRICAL AND COMPUTER ENGINEERING

J. A. Chisman (Assoc Prof) and Aloha Moreno (Grad Stu, Engl) have translated into English and privately published the Spanish operetta "Katiuska."



ELEMENTARY AND SECONDARY EDUCATION

James Matthews (Assoc Prof) spoke at the fall meeting of the Greenville County Science Teachers Association, Oct. 23. The topic was, "Legal Liability of Science Teachers."

ENGINEERING MECHANICS

E. Harry Law (Asst Prof) will present an invited paper, "Literature Survey of Railway Vehicle Dynamics Research" with Neil K. Cooperrider (Ariz State) to the American Society of Mechanical Engineers in Detroit, Nov. 12-16.

ENVIRONMENTAL SYSTEMS ENGINEERING

A. R. Abernathy (Prof), S. C. Director of the Board of Control of the Water Pollution Control Federation, reported on the WPCF's recent meeting at the annual conference of the Water and Pollution Control Association of S. C. in Columbia, Nov. 8-9.

GEOLOGY

R. D. Hatcher (Assoc Prof) has been elected Vice President of the Carolina Geological Society, an organization for geologists in North Carolina and South Carolina.

HISTORY

J. L. Arbena (Assoc Prof) presented "Competing Paradigms of Latin American Historical Development," at the Northern Great Plains History Conference, Sioux Falls, S. D., Oct. 25-27.

J. L. Arbena served as discussant of three papers on a panel entitled, "Black Life in Colonial America," at the annual meeting of the Association for the Study of Afro-American Life and History, New York, Oct. 19.

William F. Steirer, Jr. (Asst Prof) presented the paper, "Freedom and Ethical Responsibilities in North American Slavery" at the 58th annual meeting of the Association for the Study of Afro-American Life and History, New York, Oct. 18-21.

William F. Steirer, Jr. presented the paper "An Old Historical Interpretation in Modern Garb: The New Romantic's Look at Slavery" at the 7th annual meeting of the Duquesne Historical Forum in Pittsburgh, Oct. 31-Nov. 2.

## INDUSTRIAL EDUCATION

F. A. Bosdell (Asst Prof) was awarded a certificate in recognition of his "... dedication to keeping abreast of current developments in vocational-technical teacher education..." at the Annual National Vocational-Technical Teacher Education Seminar held in Dallas, Texas, Oct. 22-25.

## INDUSTRIAL MANAGEMENT

Carl L. Dyer (Assoc Prof) was chairman for a session entitled, "Forecasting Models and Applications" at the Southeastern Regional Meeting of the Institute of Management Sciences in Atlanta, Oct. 18-19.

Robert F. Zant (Asst Prof) was chairman during a session on "Systems Analysis and Information Theory" at the Southeastern Regional Meeting of the Institute of Management Sciences, held in Atlanta, Oct. 18-19.

Happy Pierce (Instr) was awarded a Certified Public Accountant Certificate by the State of Arkansas on Oct. 22.

Evans A. LaRoche (Prof) has been re-elected for the fourth consecutive term, as secretary of the Textile and Needle Trades Division of the American Society for Quality Control.

E. Earl Burch (Asst Prof) served as program chairman for the Southeastern Regional Meeting of the Institute of Management Sciences which was held in Atlanta, Oct. 18-19. He was also elected secretary-treasurer of the Southeastern Chapter of TIMS for 1974.

Furman Ray Gray (Assoc Prof) and Michael R. Allen (Asst Prof) participated in teaching the "Enrolled Agents Review" Course for the South Carolina Association of Public Accountants at the Ramada Inn, Columbia, on Sept. 21.

James A. Turner, Jr. (Assoc Prof) and past president of the South Carolina Association of Accounting Teachers presided over the business session of the fall meeting which was held at the University of South Carolina, Sept. 28. Chairman for the technical session was Furman Ray Gray (Assoc Prof).

## MATHEMATICAL SCIENCES

James A. Reneke (Assoc Prof) gave an hour-talk entitled "Hereditary Systems" at U.N.C. - Charlotte on Oct. 23 and at East Carolina on Oct. 24.

C. B. Garcia (Asst Prof) attended the Institute of Management Sciences Southeastern Regional meeting in Atlanta Oct. 18-19 and presented a paper entitled, "A Hybrid Algorithm for the Computation of Fixed Points" on Oct. 19.

## LANGUAGES

The department of Languages was host to a joint meeting of AAT'S and SCCFLT on Oct. 20. 112 teachers and students from high schools and colleges throughout the state participated in the day-long event.

Judith Melton (Asst Prof) spoke on "The Use of Drama in the Teaching of German" to the American Association of Teachers of German. Leon Seamon (Asst Prof) presented a paper entitled "The Use of Drama in Teaching Foreign Languages" to the American Association of Teachers in Spanish. E. L. Wall (Instr) presented a paper entitled "Louisiana Music" to the South Carolina Chapter of the American Association of Teachers of French. Russell Willingham (Instr) presented a paper entitled "Phase four: Integrating Black Language and Culture into Language Learning" to the South Carolina Chapter of the American Association of Teachers of French.

H. E. Stewart (Prof and Hd) is 1st Vice President of the South Carolina AATF, Gaston J. Fernandez (Assoc Prof) was elected Vice President of AATSP, and Leon E. Seamon (Asst Prof) is Secretary-Treasurer of AATSP.

Gaston J. Fernandez (Assoc Prof) presented a paper "El tema de la esclavitud en los Versos sencillos de Jose Marti" at the 23rd annual Mountain Interstate Foreign Language Conference held at Eastern Kentucky University, Richmond, Ky., Oct. 4-6. Dr. Fernandez will serve as President for the 24th annual Mountain Interstate Foreign Language Conference to be held at Clemson University, Oct. 10-12, 1974.

Leon Seamon (Asst Prof) directed a Spanish play entitled Aventura en lo gris by Buero Vallejo which was presented on Oct. 23 at 8:00 p.m. in Dnaiel Auditorium. The play was also presented to approximately 350 Spanish students in the Columbia area at Dreher High School on Oct. 25. The cast was made up of students currently enrolled in Spanish classes.

## PHYSICS AND ASTRONOMY

R. C. Turner (Asst Prof) served as Vice Chairman for the meeting of the Fifth Southeastern Magnetic Resonance Conference and was elected Chairman for the 1974 meeting which will be held at Clemson University.

## POLITICAL SCIENCE AND SOCIOLOGY

William C. Capel (Assoc Prof) has published a review of Men in a Developing Society: Geographical and Social Mobility in Monterrey, Mexico, by George Balan, Harley L. Browning and Elizabeth Jelin, in Southeastern Latin Americanist, XVII, 2, 11, (Sept. 1973).

## MECHANICAL ENGINEERING

C. A. Brandon (Assoc Prof) presented an invited lecture "Renovation of Dye House Wastewater--Hyperfiltration Pilot Plant Update" to the American Association of Textile Colorists and Chemists in Greenville, Oct. 20.

Eugene Harrison (Prof) and E. E. Mitchell (U.S. Naval Academy) presented the paper "Active Machine Tool Controller Requirements for Noise Attenuation" at the Design Engineering Conference in Cincinnati, Sept. 9-12.

NASA has awarded a \$40,000 contract for a parametric evaluation of hyperfiltration for shower water recycle in space to J. C. Hester (Assoc Prof and Hd), C. A. Brandon and J. L. Gaddis (Assoc Prof).

A Linde PHC-250 Cutting Power Supply, worth \$3000, has been received from the Linde Division of Union Carbide Corporation by J. C. Hester. The 70-kilowatt power supply will be used in energy conversion studies.

## RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) participated in The National Board of Directors of The American Camping Association meeting at ACA headquarters "Bradford Woods" in Indiana, Oct. 12-14.

Jack Stevenson spoke on "Management by Objectives in Recreation Administration" to the South Carolina Recreation and Park Society Annual Conference in Myrtle Beach, Oct. 16.

## TEXTILE DEPARTMENT

John J. Porter (Assoc Prof) was invited to speak at a seminar, "The Environmental Challenge," presented to the American Textile Machinery Associates and Textile Industries in Greenville, Oct. 30.

Donald W. Lyons (Assoc Prof) and John D. Hatcher (Asst Prof) have received notification of a grant to conduct "Occupational Safety and Health Workshops for State and Local Government Employees." The program is supported by the U. S. Office of Education through the Title I of the Higher Education Act. This is the second year of support for this program which involves conducting workshops and short courses in occupational safety and health for city and county officials and work supervisors and the development of a safety training manual for municipal and county operations.



TEXTILE DEPARTMENT Continued

Donald W. Lyons and John D. Hatcher have co-edited a booklet entitled "Engineering Control of Cotton Dust" as a report on a 1972 conference held at the University. The booklet comprises a collection of nine papers written by industrial and government researchers and Clemson faculty and is being distributed to managers and researchers throughout the textile industry.

ZOOLOGY

Sidney A. Gauthreaux, Jr. (Assoc Prof) recently attended the XIIIth International Ethological Congress in Washington, D.C. and delivered an invited paper entitled, "Global Wind Patterns and the Orientation and Evolution of Bird Migration." The meeting was sponsored by the University of Maryland and the Smithsonian Institution.

CALENDAR OF CAMPUS EVENTSNovember

- 13-17 -- "The Importance of Being Earnest" by Oscar Wilde, presented by the Clemson University Players drama troupe, Daniel Auditorium, 8 p.m.
- 15 -- University Union Fine Arts Film: "Leonardo de Vinci: His Life, His Art, His Notebooks, His Inventions," Lowry Hall, 8 p.m.
- 15-17 -- Advisory Boards to the departments of the College of Engineering meeting
- 15-17 -- University Union Movie: "The Cowboys," Holtzendorff YMCA, 6:50 & 9 p.m.
- 16 -- Dr. James E. Bostic Jr., deputy assistant secretary of agriculture for rural development, discussing his recent trip to the People's Republic of China, talk and color slide presentation, Sirrine Auditorium, 2:30 p.m.
- 16 -- Chemistry Seminar: Dr. R. Moss of Rutgers University on "Carbene Chemistry," Room 131 Brackett Hall, 4:45 p.m.
- 17 -- Football: Maryland, here, 1:30 p.m.
- 18 -- University Union Fine Arts Film: "Orpheus," Holtzendorff YMCA, 8 p.m.
- 19 -- Seminar: Dr. William A. Ward, University of North Carolina at Wilmington, on "New Developments in Benefit-Cost Analysis," presented by Department of Agricultural Economics and Rural Sociology, Room 1 Kinard, 3 p.m.

20 . November 15, 1973

CALENDAR OF CAMPUS EVENTS Continued  
November

- 19 -- International Student Association panel discussion of Mid-East Crisis, Holtzendorff YMCA, Foreign Student Lounge, 7 p.m.
- 19-21 -- University Union Movie: "The Seven Minutes," Holtzendorff YMCA
- 19-30 -- College of Architecture Exhibit: "Architectural Thesis Exhibit," examples of student work, Lee Gallery
- 19 -- Spanish Film, Daniel Auditorium, 7 p.m.
- 20 -- Chemistry Seminar: Dr. Richard Palmer of Duke University on "Electronic Spectra of Transition Metal Complexes," Room 131 Brackett Hall, 4:45 p.m.
- 21 -- Workshop on Upgrading the Performance of Sewage Lagoons, Room 302 Rhodes Engineering Research Center
- 21-26 -- Thanksgiving Holidays
- 21 -- Fort Hill Quarterback Club Luncheon, Clemson House, 12 noon
- 24 -- Football: South Carolina, Columbia, 1:30 p.m.
- 26 -- Films of Clemson-Carolina Football Game, Holtzendorff YMCA, 7 p.m.
- 26-28 -- University Union Movie, "The Adventurers," Holtzendorff YMCA
- 27 -- Speakers Bureau: Buster Crabbe, former movie great and Olympic swimming star, on "The Golden Age of Hollywood (1930's-1950's)", Tillman Auditorium, 7 p.m.
- 28 -- Chemical Engineering Colloquia Series: M.W. Davis, University of South Carolina, "Extraction Theory and Form of the Extraction Complex for the Lanthanide Metals in the Synergistic System Kerosene/HTTA/TBP/Dilute  $\text{HNO}_3$ ," Earle Auditorium, 4 p.m.
- 28-29 -- Short Course: Interactive Computing, The Computer as a Resource, Rhodes Engineering Research Center
- 28 -- Seminar: Dr. W.P. Williams Jr., Clemson, on "Potential for Oil Seed Proteins for Food," presented by Department of Agricultural Economics and Rural Sociology, Room 1 Kinard, 3 p.m.
- 29 -- Mountain Music and Folklore Concert, featuring Dick and Anne Albin, 8 p.m.
- 30 -- Seminar in Building Design and Operation for Energy Conservation, Holiday Inn
- 30-1 -- Basketball: Clemson University Tip-Off Tournament (Clemson, Auburn, Jacksonville, St. John's), Littlejohn Coliseum

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

UNIVERSITY OF  
SOUTH CAROLINA ROOM

DEC 3 1973

Vol. 13

No. 8

December 1, 1973



President Robert C. Edwards with Mr. and Mrs. J. Wilson Newman at dinner announcing the establishment of the Charles Carter Newman Endowed Chair of Natural Resources Engineering.

## Newman Endowed Chair Established In Natural Resources Engineering

Clemson University announced Nov. 19 the establishment of an endowed chair in natural resources engineering made possible by a gift of some \$500,000 by Mr. and Mrs. J. Wilson Newman of Short Hills, N.J.

Newman is a 1931 Clemson graduate.

"The Charles Carter Newman Endowed Chair of Natural Resources Engineering" is established in honor of Newman's father, who was a teacher and researcher in horticulture at Clemson for almost 50 years. It will eventually bring to the College of Agricultural Sciences a renowned scientist-scholar who will teach, conduct research and publish in this increasingly important field.



The Newman donation to the Clemson University Foundations is a combination of outright cash gifts and deferred gifts. The chair is the second of nine endowed chairs the foundation plans for the university by 1982.

"It is most appropriate that Prof. Newman's life-long interest in improving his environment should now be extended to the conservation of land, air and water resources which the establishment of this chair makes possible," said Clemson President Robert C. Edwards at ceremonies marking the occasion.

"With the capability this gift provides, we can now make a great contribution to teaching and research in an area becoming increasingly important in man's efforts to solve the problems of the environmental crisis, the rapid depletion of earth's natural resources, and what has been called 'the emerging age of worldwide scarcity,'" Edwards said.

J. Wilson Newman, a Clemson native, was for 16 years chief executive officer and is now chairman of the finance committee and a director of Dun and Bradstreet Cos., Inc., New York City. His maternal grandfather was the first president of Clemson; his paternal grandfather was the university's first professor of agriculture.

Mrs. Newman, the former Clara Collier of Corinth, Miss., is a prominent New Jersey community affairs and civic leader. For several years she was an officer of the Short Hills, N.J., Garden Club, one of the founders of the Garden Club of America. She has always maintained an extensive involvement in school, church, hospital and civic affairs.

Charles C. Newman (1875-1946), whose memory the endowed chair will honor, was an innovative and visionary horticulturist, especially in the area of plant introductions. He was one of the first to advocate the use of trellises and pruning with muscadine grapes, practices common today but unheard of in the early 1900's.

His work with collecting and breeding okra specimen's led to the development of

Clemson's world famous spineless variety. Grafting tomato plants onto jimson weed roots was another unusual approach he too to diminish disease and increase productivity. With a particular interest in landscape gardening, Prof. Newman planned for and helped create much of the early Clemson campus beautification projects and philosophy.

"It has seemed to Mrs. Newman and myself that a wide gulf is developing between resources exploitation on the one hand and unreasonable conservation efforts on the other," said Newman. "We believe this gulf should be resolved by leadership from the campuses rather than controversies in the courts," he said.

Newman said that the endowment, in addition to honoring his father and the five generations of the Newman family that have been identified with Clemson, was made to call attention to and help solve the problems of sensible utilization and conservation of land, air and water resource for the benefit of all mankind.

Natural resources engineering is the application of engineering design and management to the use and protection of basic natural resources, particularly the renewable soil and water resources involved in the interrelationships of plant and animal life.

Clemson's agricultural engineering department has 19 faculty members involved in teaching and research in the area. Staff members have obtained national reputations, especially in soil and water conservation engineering and agricultural waste management.

The Newman Chair will strengthen Clemson emphasis on developing a philosophy concerned with protecting and conserving renewable resources in a manner compatible with man's present and future needs for food and fibers.

Paul a. Gorman, chairman and president of International Paper Co. and a close friend of the Newmans who shares their philosophy of wise use of natural resources, delivered the main address at the announcement dinner Monday night.



## Jervey Athletic Center Dedicated in Ceremonies Nov. 19

Clemson University's new \$2 million athletic center was dedicated Nov. 19 as a tribute to an alumnus whose life personifies the true meaning of service and loyalty to an institution.

The Frank Johnstone Jervey Athletic Center is named in honor of a 1914 Clemson graduate, who, after a distinguished military and civilian career, returned to serve his alma mater full time. Jervey served as a vice president at Clemson and is presently a life member of the Board of Trustees.

The center, a two-building complex, is the new home of Clemson's intercollegiate athletic program. It includes an administrative-coaching personnel facility and a two-level, multi-purpose structure which can serve as an indoor practice field during inclement weather.

Clemson president, Dr. Robert C. Edwards, accepted the Jervey Athletic Center on behalf of the university. He described Capt. Jervey as a man whose "intense interest in and great loyalty to Clemson has never wavered for the slightest moment."

Edwards, who recalled that he has been closely associated with Jervey in their professional capacities at the university for the past 18 years, said, "His considerable talents and skills have always been at Clemson's service.

"No road has been too long for him to walk and no task has been too small for him to do, if, in the walking and in the doing, he could further the best interest of an institution which he has dearly loved and faithfully served," Edwards continued.

"When the times have been good, his genial wit and courtly manners have graced our work, and when the days were dark, Capt. Jervey kept the faith and gave of his courage and strength until the light was found," the Clemson president concluded.

The dedication ceremonies, attended by many of Jervey's longtime friends from South Carolina and other states, came on the eve of his 80th birthday (Nov. 27). Born at Summerville, Jervey served with the Army in World War I after his graduation from Clemson. He was wounded in 1918 during the battle for France and decorated for extraordinary heroism.

Jervey later served in the Ordnance Corps and became one of the world's foremost authorities on incendiary and small arms ammunition. For his contributions to the nation's war effort in World War II, he was awarded the Exceptional Civilian Service emblem at the Pentagon.

Jervey, who was presented an honorary Doctor of Science degree from Clemson in 1953, served as Clemson's vice president for development from 1959-63. He received the Alumni Distinguished Service Award the first year they were given in 1960, and was greatly instrumental in obtaining two grants totaling nearly \$2 million from Olin Foundation for construction and equipping of the ceramic and chemical engineering buildings on the campus.

Jervey Athletic Center is located in the west campus area near Clemson Memorial Stadium and Littlejohn Coliseum. It houses, under one roof, offices for all of the coaching and related staffs for the athletic department -- a unique feature that places it among the most modern of its kind anywhere.

## Board Approves Construction Contracts, Increases Fees

The Clemson University Board of Trustees confirmed Monday the awarding of two construction contracts.

Meeting on campus, the board confirmed a \$4,350,00 bid from Triangle Construction Co. of Greenville for construction of the Agricultural Administration and Forest and Recreation Resources Facility, and a \$117,677 bid from Boozer and Wharton, Inc. of Sumter for construction of the Swine Testing Station.

The board also approved, effective the 1974 summer session, increases in the following fees (based on per semester hour):

-- summer session fees, from \$20 to \$22 for S.C. resident students; from \$35 to \$44 for non-resident students.

-- university fee, from \$14 to \$16 for part-time S.C. resident students.

-- auditing fee, from \$7 to \$8 for S.C. resident students.

In other action, the board approved the appointment of Dr. Joseph E. Baker, Professor Emeritus of English at the University of Iowa, as the William James Lemon Professor of Literature for the 1973-74 spring semester.

Due to the present critical student housing shortage on campus, the board gave the university permission to utilize additional space at The Clemson House for regular student housing next academic year.

#### **"The South Carolina Review" Now Published by Clemson**

The latest issue of "The South Carolina Review," the only magazine in the state devoted to scholarly articles on literary subjects, as well as creative literature, has just been published by Clemson University.

Volume 6 of the magazine is coming off the presses for the first time under Clemson direction. The "Review," published by Furman University the past five years, is now published by Clemson's College of Liberal Arts and its English department.

The "Review" makes an appeal to literary scholars and general readers by publishing select short fiction, poetry, book reviews, interviews with prominent literary figures, and critical and scholarly articles. The biannual publication,

with an international circulation and subscription cost of \$2 a year, has more than quadrupled its circulation since June.

The November issue contains three critical essays, an interview with writer George Garrett, reviews of Larry Lieberman's "Osprey Suicides" and Philip Roth's "The Great American Novel," two short stories, and 12 poems, including works by such authors as Kathryn Stripling of Cullowhee, N.C.; Larry Rubin, poet-in-residence at Georgia Tech; and Jack Stillinger, professor at the University of Illinois.

Professors Richard J. Calhoun and Robert W. Hill are editors of the periodical. Prof. William Koon is managing editor.

"South Carolina has a long tradition of excellent literature and literary magazines particularly in the antebellum era (1850-1850-60) with such journals as 'Russell's,' 'The Southern Quarterly Review,' 'The Southern Review,' 'The Southern Literary Journal,' and 'The Magnolia,' all of which brought national attention to the South Carolina literary scene," says Calhoun.

"Our new policies will not be many," he says, "but we hope to give the 'Review' broader appeal while continuing its dual role as literary magazine and scholarly periodical and its dedication to literary excellence."

The magazine will continue to emphasize state and Southern literature but will solicit more contributions by writers outside the region than in the past. Subscription requests and manuscripts to be considered for publications should be sent to "The South Carolina Review," English Department, Clemson University.

"We also plan to publish more critical essays, more reviews of significant creative and scholarly works, and to restore a feature of the older South Carolina magazines -- the editor's column in which we'll comment on topics of interest, mention new books, literary conferences and workshops, and announce issues of the 'Review' which will be devoted to special topics," says Calhoun.

The first "special topic" issue will be the fall 1974 issue, which will feature critical articles on Robert Frost as a part of

the national Frost centenary. Deadline for submitting articles is Aug. 15, 1974.



**CLEMSON GROUNDBREAKING** — Robin Hardin, representing Clemson University students majoring in forestry and recreation and parks administration, and Clemson President Robert C. Edwards turn some ceremonial shovelfuls of earth on the site of the university's planned Forest and Recreation Resources Building (shown in photo at left). Dean Davis McGregor of the College of Forest and Recreation Resources is at left and R. Scott Wallinger, chairman of the Forestry Study Committee of S.C., is at right. The new building, part of a \$4.3-million complex that will include an Agricultural Building, is to be located on the south campus adjacent to the Plant and Animal Science Building.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOVEMBER 5, 1973

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Walter T. Cox, Luther P. Anderson, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Alfred F. Newton, Melvin C. Long, James E. Dalton, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, K. N. Vickery, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of October 1, 1973 were approved as submitted.

2. Curriculum Changes

Statement and Recommendation: The Dean of the University recommends additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

I, COLLEGE OF AGRICULTURAL SCIENCES

A. Undergraduate Courses

AnSc 202 Introduction to Animal Science, 3 cr (2 and 3).  
Replaces AnSc 201 and AnSc 203, which should be deleted from the course offerings.

FdSc 201 Man and His Food, 2 cr (2 and 0).

FdSc 431 Food Processing, 2 cr (2 and 0). Replaces FdSc 321, which should be deleted from the course offerings.

FdSc 432 Food Processing, 2 cr (2 and 0). Replaces FdSc 322, which should be deleted from the course offerings.

FdSc 433 Food Processing Laboratory, 2 cr (1 and 3). Replaces FdSc 323, which should be deleted from the course offerings.

FdSc 434 Food Processing Laboratory, 2 cr (1 and 3). Replaces FdSc 324, which should be deleted from the course offerings.

B. Graduate Courses

AgE 781 Special Problems, 1-3 cr - revision of existing course

AgE 871 Selected Topics in Ag. Engineering, 1-3 cr - Replaces AgE 801.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)

- AgM 771 Selected Topics in Ag. Mechanization, 1-3 cr (1-3 and 0).
- AgM 781 Special Problems, 1-3 cr (1-3 and 0). Title change and credit change.
- FdSc 620 Special Topics in Food Science, 1-3 cr (1-3 and 0)

II. COLLEGE OF EDUCATION

A. Undergraduate Courses - Changes in Course Descriptions

- AS 209 Growth and Development of Aerospace Power, 1 cr (1 and 1).
- AS 210 A Quarter Century of Aerospace Power, 1 cr (1 and 1).
- AS 309 Contemporary National Security, 3 cr (3 and 1).
- AS 310 Contemporary National Security Policy, 3 cr (3 and 1).

III. COLLEGE OF ENGINEERING

A. Undergraduate Courses

- AgE 353 Computational Systems, 2 cr (1 and 3). Change in course description only.
- AgE 364 Agricultural Waste Management Systems, 2 cr (2 and 0).
- BioE 233 Introduction to Engineering in Sports, 3 cr (3 and 0).
- E&CE 307 Basic Electrical Engineering, 3 cr (2 and 2). Change in format of course.
- ESE 401 Environmental Engineering, 3 cr (3 and 0). Change in course description only.
- ME 313 Instrumentation and Measurements, 3 cr (2 and 3). Change in credits only, from 2 cr (1 and 2).
- ME 400 Dynamic Systems Analysis and Control, 4 cr (3 and 3). Replaces ME 316, which should be deleted from the course offerings.
- ME 412 Thermal Systems, 3 cr (3 and 0). Description and title change only.
- ME 413 Thermal Systems Laboratory, 1 cr (0 and 3). Description and title change only.
- ME 414 Mechanical Systems Laboratory, 1 cr (0 and 3). Description and title change only.

## MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)

B. Curriculum Revisions

## 1. AGRICULTURAL ENGINEERING CURRICULUM

Freshman Year			
First Semester		Second Semester	
CH 101 General Chemistry	4 (3,3)	Basic Science	4
ENGL 101 English Composition	3 (3,0)	ENGL 102 English Composition	3 (3,0)
ENGR 180 Engineering Concepts	3 (2,2)	Humanistic-Social Elective <sup>1</sup>	3 (3,0)
MATH 106 Calculus of One Var.	4 (4,0)	MATH 108 Cal. and Lin. Algebra	4 (4,0)
Elective	1	PHYS 122 Mech. and Wave Phen.	3 (3,0)
AGRI 101 Introduction to Agric.	1 (1,0)	Elective	1
	<u>16</u>		<u>18</u>

Sophomore Year			
First Semester		Second Semester	
AGE 221 Soil & Water Res. Engr. I	3 (2,3)	AGE 212 Fund. of Mechanization	3 (2,3)
EG 109 Engr. Graphical Com.	2 (0,6)	EM 202 Engr. Mech. (Dynamics)	3 (3,0)
EM 201 Engr. Mech. (Statics)	3 (3,0)	MATH 208 Engineering Math I	4 (5,0)
MATH 206 Calculus of Sev. Var.	4 (4,0)	Plant Sci. Elective <sup>1</sup>	3
PHYS 221 Thermal and Elec. Phen.	3 (3,0)	Humanistic-Social Elective <sup>1</sup>	3 (3,0)
Literature Elective <sup>1</sup>	3 (3,0)	Elective	1
Elective	1		
	<u>19</u>		<u>17</u>

Junior Year			
First Semester		Second Semester	
AGE 353 Computational Systems	2 (1,3)	AGE 362 Energy Conv. in Ag. Sys.	3 (2,3)
AGE 355 Engr. Anal. and Creat.	2 (1,3)	AGE 433 Design Criteria for Plant and Animal Environment	2 (2,0)
EM 304 Mechanics of Materials	3 (3,0)	AGE 465 Engr. Prop. of Biol. Mat.	2 (1,3)
or EM 320 Fluid Mechanics	3 (3,0)	AGE 364 Agric. Waste Mgt. Systems	2 (2,0)
Engr. Sci. Elective <sup>1</sup>	3	PHYS 222 Optics and Mod. Phys.	3 (3,0)
Anim. Sci. Elective <sup>1</sup>	3	Soils Elective <sup>1</sup>	3
E&CE 307 Basic Elec. Engr.	3 (3,0)	Engr. Sci. Elective <sup>1</sup>	3
	<u>16</u>		<u>18</u>

Senior Year			
First Semester		Second Semester	
AGE 431 Agri. Structures Design	3 (2,3)	AGE 416 Agric. Machinery Design	3 (2,3)
AGE 471 Undergraduate Research	1 (0,3)	AGE 422 Soil & Water Res. Engr. II	3 (2,3)
ECON 201 Principles of Economics	3 (3,0)	AGE 442 Agric. Process Engr.	3 (2,3)
or ECON 200 Economic Concepts	3 (3,0)	Engr. Sci. Electives <sup>1</sup>	6
Math Elective <sup>1</sup>	3 (3,0)	Elective	3
Humanistic-Social Elective <sup>1</sup>	3 (3,0)		
Elective	3		
	<u>16</u>		<u>19</u>

<sup>1</sup> Electives to be selected in consultation with adviser.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)

B. Curriculum Revisions (Continued)

1. AGRICULTURAL ENGINEERING CURRICULUM

(a) Electives:

1. Either CH 102, BOT 101 & 103, or ZOOL 101 & 103
2. At least one course to be selected from ENGL 203, 204, 205, 206, 207, 208  
Others may be  
SOC 201  
Pol Sci 101, 201, 302, 331  
Psych 201, 301, 302, 303, 401, 411  
Hist 101, 102, 171, 173, 313  
Ger 101, 102  
Fr 101, 102  
Russ 101, 102  
Span 101, 102
3. Either BOT 101, AGRIC 202, HORT 201, or FOR 305 & 307
4. At least one course to be selected from at least three groups:  
Group 1 CrE 310, MatE 301  
2 E&CE 327, 329, 315  
3 ChE 352, ME 301, CE 460  
4 ME 311  
5 ME 304  
6 EM 304, 320
5. Either ZOOL 101, An Sc 202, Dy Sc 201, or PS 203
6. Either AGRON 202, CE 330, or GEOL 406
7. Either MATH 301, Comp Sc 206, Comp Sc 210, or Ex St 301
8. ENGL 301 highly recommended

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)B. Curriculum Revisions (Continued)2. MECHANICAL ENGINEERING CURRICULUM

<u>Freshman Year</u>			
First Semester		Second Semester	
Ch 101 General Chemistry	4 (3,3)	Ch 102 General Chemistry	4 (3,3)
Math 106 Calc of One Variable	4 (4,0)	Math 108 Calc and Lin Algebra	4 (4,0)
Engl 101 English Composition	3 (3,0)	Engl 102 English Composition	3 (3,0)
Free Elective	2	Free Elective	1
Engr 180 Engr Concepts (or Humanistic-Social Elective)	3 (2,2)	Humanistic-Social Elective (or Engr 180 Engr Concepts)	3
		Phys 122 Mech and Wave Phen	3 (3,0)
	<u>16 Cr.</u>		<u>18 Cr.</u>

<u>Sophomore Year</u>			
First Semester		Second Semester	
ME 201 Innovative Design I	2 (1,3)	ME 202 Innovative Design II	3 (2,3)
EM 201 Statics	3 (3,0)	EM 202 Dynamics	3 (3,0)
Math 206 Calc of Sev Var	4 (4,0)	Math 208 Engr Math	4 (5,0)
Literature Requirement	3 (3,0)	Literature Requirement	3 (3,0)
Phys 221 Therm and Elect Phen	3 (3,0)	Phys 222 Opt and Mod Phys	3 (3,0)
Humanistic-Social Elective	3	Free Elective	1
	<u>18 Cr.</u>		<u>17 Cr.</u>

<u>Junior Year</u>			
First Semester		Second Semester	
ME 301 Engr Sys Analy	3 (3,0)	ME 304 Heat Transfer	3 (3,0)
ME 311 Engr Thermo I	3 (3,0)	ME 312 Engr Thermo II	3 (3,0)
EM 320 Fluid Mech	3 (3,0)	ME 313 Inst. & Meas.	3 (2,3)
ECE 307 Basic Elect Engr.	3 (3,2)	ECE 308 Appl of Elect Engr	3 (2,2)
CrE 310 Material Science	3 (3,0)	EM 304 Mech of Mat.	3 (3,0)
Free Elective	3	Humanistic-Social Elective	3
	<u>18 Cr.</u>		<u>18 Cr.</u>

<u>Senior Year</u>			
First Semester		Second Semester	
ME 406, Dyn Syst Analy & Cont	4 (3,3)	ME 402 Innov. Design III	3 (2,3)
ME 405 Kinem. & Dyn. of Mach.	3 (3,0)	Tech Elective	3
Tech Elective	3	Tech Elective	3
ME 412 Thermal Systems	3 (3,0)	Humanistic-Social Elective	3
ME 401 Design of Mach. Ele.	3 (3,0)	Free Elective	3
ME Senior Lab (ME 413 or 414)	1 (0,3)	ME Senior Lab (ME 414 or 413)	1 (0,3)
	<u>17 Cr.</u>		<u>16 Cr.</u>



## MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)

## IV. COLLEGE OF FOREST AND RECREATION RESOURCES

A. Undergraduate Course

RPA 308 Leadership and Group Processes in Recreation, 3 cr (3 and 0).  
Description and title change only

## V. COLLEGE OF INDUSTRIAL MANAGEMENT AND TEXTILE SCIENCE

A. Undergraduate Course

IM 299 Computer Programming I, 1 cr (0 and 3). Description change only.

B. Curriculum Revisions

1. INDUSTRIAL MANAGEMENT CURRICULUM  
(Effective Fall Semester 1974)

## Freshman Year

Chem	101	General Chem	4	(3,3)	Chem	102	General Chem	4	(3,3)
EG	103	Engr Com & Dsgn	3	(1,6)	Phys	122	Mech & Wave Phen	3	(3,0)
History	173	Western Civ	3	(3,0)	Engl	102	English Comp	3	(3,0)
Engl	101	English Comp	3	(3,0)	Math	108	Cal & Lin Alg	4	(4,0)
Math	106	Anal Geom Cal I	4	(4,0)	Elective			3	

17

17

## Sophomore Year

Acct	201	Prin of Acct	3	(3,0)	Acct	202	Prin of Acct	3	(3,0)
Econ	201	Prin of Econ	3	(3,0)	Econ	202	Prin of Econ	3	(3,0)
Soc	201	Intro to Soc	3	(3,0)	IM	201	Intro to IM	3	(3,0)
Comp Sc	205	Elem Comp Prog	3	(3,0)	IM	299	Comp Prog I	1	(0,3)
Phys	221	Thermal & Elec Ph	3	(3,0)	Math	301	Stat Methods I	3	(3,0)
Phys	223	Engr Phys Lab	1	(0,3)	Elective			2	(2,0)

16

15

## Junior Year

Econ	314	Inter Econ Theory	3	(3,0)	IM	308	Marketing Strategy	3	(3,0)
IE	307	Survey of Engr	3	(3,0)	Soc	351	Indus Soc	3	(3,0)
Acct	303	Cost Acct	3	(3,0)	IM	304	Quality Control	3	(3,0)
IM	322	Legal Env of Bus	3	(3,0)	Mgt Sc	311	Econometrics	3	(3,0)
*Area Concentration					*Area Concentration or TE			3	
or Elective			3		Elective			1	
Eng Lit Requirement			3	(3,0)					

18

16

## Senior Year

Acct	410	Bud & Exec Cont	3	(3,0)	IM	402	Oper Plan & Cont	3	(3,0)
Mgt Sc	414	Stat Analysis	3	(3,0)	MASC	413	Mgt Sci I	3	(3,0)
Engl	304	Adv. Composition	3	(3,0)	IM	415	Mgt Dec Making	3	(3,0)
IM	408	Work Simp & Stand	3	(3,0)	IM	407/410	Directed Research	1	(1,0)
IM	418	Man Info Systems	3	(3,0)	IM	499	Computer Pro II	1	(0,3)
*Area Concentration or TE			3		*Area concentration or TE			3	
					Elective			1	

18

15

\*A student not selecting an area concentration may, with the approval of his advisor, select instead 9-12 credits from an approved technical elective list.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)2. BACHELOR OF SCIENCE IN ACCOUNTING  
(Effective Fall Semester, 1974)

## Freshman Year

Science *	Elective Science	4 (3,3)	Science *	Elective Science	4 (3,3)
Hist	173 Western Civ	3 (3,0)	Acct	202 Prin of Acct	3 (3,0)
Engl	101 English Comp	3 (3,0)	Engl	102 English Comp	3 (3,0)
Math	106 Anal Geom Cal I	4 (4,0)	Math	108 Cal & Lin Alg	4 (4,0)
Acct	201 Prin of Acct	3 (3,0)	Elective		3
17			17		

## Sophomore Year

Acct	301 Intermediate Acct	3 (3,0)	Acct	302 Intermediate Acct	3 (3,0)
Econ	201 Prin of Econ	3 (3,0)	Econ	202 Prin of Econ	3 (3,0)
Soc	201 Intro to Soc	3 (3,0)	IM	201 Intro to IM	3 (3,0)
Math	207 Multidim Cal	3 (3,0)	Math	301 Stat Methods I	3 (3,0)
Engl	Lit Requirement	3 (3,0)	Engl	Lit Requirement	3 (3,0)
			Comp Sc	205 Elem Comp Prog	3 (3,0)
15			18		

## Junior Year

Econ	314 Inter Econ Theory	3 (3,0)	Engl	304 Adv Comp	3 (3,0)
Engl	301 Public Speaking	3 (3,0)	Soc	351 Indus Soc	3 (3,0)
IM	312 Commercial Law	3 (3,0)	Mgt Sc	311 Econometrics	3 (3,0)
IM	306 Corporation Fin.	3 (3,0)	Acct	303 Cost Acct	3 (3,0)
Approved Elective		4	IM	313 Commercial Law	3 (3,0)
			Approved Elective		3
16			18		

## Senior Year

Acct	410 Bud & Exec Cont	3 (3,0)	Acct	405 Advanced Fed Tax	3 (3,0)
Mgt Sc	414 Stat Analysis	3 (3,0)	Acct	415 Auditing	3 (3,0)
Acct	411 Advanced Acct	3 (3,0)	IM	415 Mgt Dec Making	3 (3,0)
Acct	305 Income Taxation	3 (3,0)	IM	404 Managerial Econ	3 (3,0)
Approved Elective		3	Acct	407 Directed Research	1 (0,3)
			Approved Elective		3
15			16		

\*Science elective includes any natural or physical science.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)3. B. S. IN FINANCIAL MANAGEMENT  
(Effective Fall Semester, 1974)

## Freshman Year

Engl	101 English Comp	3 (3,0)	Engl	102 English Comp	3 (3,0)
Hist	173 Western Civ	3 (3,0)	Pol Sc	101 Intro to Pol Sc	3 (3,0)
Math*	101 Math Analysis I	3 (3,0)	Math*	102 Math Analysis II	3 (3,0)
Acct	201 Prin of Acct	3 (3,0)	Acct	202 Prin of Acct	3 (3,0)
IM	201 Intro to IM	3 (3,0)	Econ	201 Prin of Econ	3 (3,0)
Elective		1 (1,0)	Elective		1 (1,0)
16			16		

## Sophomore Year

Engl	Lit Requirement	3 (3,0)	Engl	Lit Requirement	3 (3,0)
Soc	201 Introd Soc	3 (3,0)	Psych	201 General Psych	3 (3,0)
Math*	203 Elem Stat Infer	3 (3,0)	Comp Sc	205 Elem Comp Prog	3 (3,0)
Acct	301 Intermediate Acct	3 (3,0)	Acct	302 Intermediate Acct	3 (3,0)
Econ	202 Prin of Econ	3 (3,0)	Elective		3 (3,0)
Elective		1 (1,0)			
16			15		

## Junior Year

IM	308 Marketing Strat	3 (3,0)	IM	306 Corp Finance	3 (3,0)
Soc	351 Indus Soc	3 (3,0)	IM	307 Personnel Mgt	3 (3,0)
IM	312 Commercial Law	3 (3,0)	IM	313 Commercial Law	3 (3,0)
Engl	304 Adv Composition	3 (3,0)	Acct	303 Cost Accounting	3 (3,0)
Econ	306 Risk & Insurance	3 (3,0)	Econ	302 Money & Banking	3 (3,0)
Econ	314 Inter Econ Theory	3 (3,0)	Elective		3 (3,0)
18			18		

## Senior Year

Acct	305 Income Taxation	3 (3,0)	Engl	301 Public Speaking	3 (3,0)
IM	415 Mgt Dec Making	3 (3,0)	Econ	412 Internat Trade	3 (3,0)
Econ	422 Monetary Theory	3 (3,0)	Acct	415 Auditing	3 (3,0)
Acct	410 Bud & Exec Contr	3 (3,0)	Elective		6 (6,0)
Elective		6 (6,0)			
18			15		

\*Credits earned in Math 106 (4 cr.), 108 (4 cr.), 207 (3 cr.), 301 (3 cr.), and Management Science 414 (3 cr.) may be substituted toward Math 101, 102, 203, and eight elective credits. See class advisor.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOV. 5, 1973 (Continued)B. Curriculum Revisions (Continued)

## 4. Textile Chemistry and Textile Science

## (a) Both Curricula

(1) Delete IM 299, 1 cr. (0, 3) and replace by additional one credit course.

(2) Delete Econ 201, 3 cr. (3, 0) and replace with Econ 200, 3 cr. (3, 0).

(3) Freshman Year

Ch	101	General Chemistry	4(3,3)	Ch	112	General Chemistry	4(3,3)
Engl	101	English Composition	3(3,0)	Engl	102	English Composition	3(3,0)
Hist	173	Western Civilization	3(3,0)	Math	108	Anal. Geom., Cal. II.	4(4,0)
Math	106	Anal. Geom. Cal. I	4(4,0)	Phys	122	Mech. & Wave Phenomena	3(3,0)
Text	122	Introd. to Textiles	2(1,3)	Elective			2
Elective			<u>1</u>				<u>—</u>
			17				16

(b) Textile Chemistry Junior Year

Ch	331	Physical Chemistry	3(3,0)	Engl	304	Advanced Composition	3(3,0)
Econ	200	Economic Concepts	3(3,0)	Ch	332	Physical Chemistry	3(3,0)
TC	315	Intro. to Polymer Sci. & Engr.	3(3,0)	TC	316	Chem. Prep. of Text.	3(2,0)
TC	317	Polymer & Fiber Lab.	1(0,3)	Text	306	Yarn Formation	3(2,0)
Electives			<u>6</u>	Electives			<u>6</u>
			16				18

(c) Textile Science Sophomore Year

Engl	203,4,5,6,7 or 8	3(3,0)	Math	208	Engr. Mathematics I	4(4,0)
Math	206 Anal. Geo., Cal. III	4(4,0)	Phys	222	Optics & Mod. Phys.	3(3,0)
Phys	221 Ther. & Elcc. Phen.	3(3,0)	Phys	224	Engr. Phys. Lab.	1(0,3)
Phys	223 Engr. Phys. Lab.	1(0,3)	TC	304	Textile Chemistry	3(3,0)
TC	303 Textile Chemistry	3(3,0)	TC	306	Textile Chem. Lab.	1(0,3)
TC	305 Textile Chem, Lab.	1(0,3)	Econ	200	Economic Concepts	3(3,0)
Elective		<u>1</u>	Elective			<u>1</u>
		16				16



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOVEMBER 5, 1973 (Continued)

VI. COLLEGE OF LIBERAL ARTS

A. Undergraduate Courses

Engl 223 Folklore, 3 cr (3 and 0).

Engl 313 Discussion and Group Leadership, 3 cr (3 and 0).

Phil 201 Introduction to Philosophic Problems, 3 cr (3 and 0). Change in title only.

Phil 202 Introduction to Logic, 3 cr (3 and 0). Number change only; delete Phil 302 from the course offerings.

Phil 203 Philosophy and Current Issues, 3 cr (3 and 0). Replaces Phil 211, which should be deleted from the course offerings.

Phil 304 Moral Philosophy, 3 cr (3 and 0). Change in description only.

Phil 325 Philosophy of Science, 3 cr (3 and 0). Change in description only.

Phil 344 Current Ethical Theory, 3 cr (3 and 0). Change in description only.

Phil 422 Mathematical Logic, 3 cr (3 and 0). Change in description only.

Pol Sci 429 American Politics and Education, 3 cr (3 and 0).

Pol Sci 453 American Political Thought, 3 cr (3 and 0).

Psych 494 Topical Seminar in Social Psychology, 3 cr (3 and 0).

Psych 497 Directed Studies in Psychology, 2 cr (2 and 0). Replaces Psych 498 which should be deleted from the course offerings.

Soc 309 American Marriage and Family, 3 cr (3 and 0).

B. Graduate Course

Engl 825 Studies in Literary Genres, 3 cr (3 and 0).

VII. COLLEGE OF PHYSICAL, MATHEMATICAL, AND BIOLOGICAL SCIENCES

A. Undergraduate Courses

Math 350 Introduction to Mathematical Models, 3 cr (3 and 0). Replaces Math 295, which should be deleted from the course offerings.

PhySci 301 Concepts in the Physical Sciences for Elementary School Teachers, 3 cr (3 and 0).

Phys 240 Physics of the Weather, 3 cr (3 and 0). Change in name only.

Zool 302 Vertebrate Embryology, 4 cr (3 and 3). Increase in credit hours only, from 3 cr (2 and 3).

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOVEMBER 5, 1973 (Continued)B. Change in Curriculum

## PREPHARMACY CURRICULUM

## Freshman Year

## First Semester

Bot 101 Plant Biology.....3 (3,0)  
 Bot 103 Lab in Plant Biol...1 (0,3)  
 Ch 101 General Chemistry...4 (3,3)  
 Hist 171 or 172 West Civ...3 (3,0)  
 Math 103 College Algebra...2 (3,0)  
 Math 104 Trigonometry.....2 (3,0)  
 Engl 101 English Comp.....3 (3,0)

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## Second Semester

Zool 101 Animal Biol.....3 (3,0)  
 Zool 103 Lab in Animal Biol...1 (0,3)  
 Ch 112 General Chemistry...4 (3,3)  
 Hist 172 or 173 West Civ...3 (3,0)  
 Math 106 Cal of One Var.....4 (5,0)  
 Engl 102 English Comp.....3 (3,0)

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 18
C. Graduate Courses

Bot 701 Evolutionary Botany for Teachers, 3 cr (2 and 3). Credit change.

Bot 702 Modern Botanical Concepts for Teachers, 3 cr (3 and 0). Credit change.

Bot 815 Phycology Colloquium, 3 cr (3 and 0)

Bot 826 Physiology of the Fungi, 3 cr (3 and 0)

Ch 700 Physical Science in Elementary School - Chemistry 3 cr (2 and 3) Title & description change

Ch 702 Chemistry for High School Teachers, 3 cr (2 and 3). Title & description change

Ch 703 Special Problems in Chemistry for Secondary School Teachers, 3-6 cr.

Ch 840 Techniques of Experimental Chemistry, 3 cr (1 and 6)

Ch 906 Special Topics in Inorganic Chemistry, 1-4 cr. Replaces Ch 806).

Math 815 Data Structures, 3 cr (3 and 0).

Math 850 Computational Problems in Discrete Structures, 3 cr (3 and 0)

Math 925 Topics in Dynamical Systems, 3 cr (3 and 0). Title and description change.

Math 989 Special Topics in Information Processing, 1-3 cr (1-3 and 0).

Phys 700 Physical Science in Elementary School - Physics, 3 cr (3 and 0)

3. Policy for Awarding Bachelor of Arts and Bachelor of Science Degrees in Pre-Professional Studies

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOVEMBER 5, 1973 (Continued)

Bachelor of Arts and Bachelor of Science

in

Pre-Professional Studies

Clemson University will award the degree of Bachelor of Arts or Bachelor of Science in Pre-Professional Studies to a student who has satisfactorily completed three years of undergraduate work in an appropriate curriculum and the first year of work in an accredited medical, dental, veterinary, law, or other accredited, professional, post graduate school provided the student fulfills the requirements for the three-year program as follows and the other specified conditions are met:

- A. At least two of the three years of pre-professional work, including the third year, must be taken in residence at this University.
- B. A minimum of three years of undergraduate work (i.e. pre-professional school credit) must be presented.
- C. Normal progress must have been made toward fulfilling the degree requirements of the curriculum in which the student is enrolled at Clemson.
- D. The student applying for the Bachelor of Arts or Bachelor of Science in Pre-Professional Studies must be recommended by the College at Clemson in which the curriculum in which he is majoring as a Clemson student is located or by the College in which three years of normal progress toward a degree can be identified.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, NOVEMBER 5, 1973 (Continued)

Bachelor of Arts and Bachelor of Science  
in Pre-Professional Studies

- E. If the combination of pre-professional work taken and the work in the first year of professional school is equivalent to what is required in some other bachelor's degree program at Clemson then the College concerned may recommend the other bachelor's degree.

Retroactive. The above requirements and conditions will become effective on July 1, 1974, and will apply to all students who satisfy these requirements and conditions after that date. Former Clemson students who have left the University before receiving the bachelor's degree and enrolled immediately in an accredited, professional, post graduate school may apply for a bachelor's degree from Clemson and have their application considered on an individual basis. For these students the College at Clemson considering his application is authorized to examine the student's entire record in both pre-professional and professional studies and exercise its own judgment concerning the three-year requirement for pre-professional studies.

Action: Approved.

*E. N. Tyndall*  
E. N. Tyndall  
Secretary



MINUTES OF THE MEETING OF THE FACULTY SENATE, OCT. 9, 1973

President Fulton called the meeting to order at 4:17 p.m. He called attention to some errors and suggested some changes in the Minutes of the Senate meeting of Sept. 11. After the Senators had discussed them at considerable length, Prof. Dillon moved that the Minutes, incorporating Pres. Fulton's suggested changes, be approved. The motion carried.

President's Report

President Fulton reported that the Senate's Advisory Committee had unanimously accepted his nomination of members for Senate Ad Hoc Committee C on Faculty Evaluation of Academic Administrators. They are: W. E. West, Chairman, R. D. Shannon, E. B. Rogers, A. H. Adams, Eugene Park, and M. W. Jutras. President Fulton said he believed that this "distinguished group of faculty members" would present to the Faculty Senate an excellent report.

President Fulton reported on the status of the Senate's RESOLUTION OF FACULTY PROTEST (FS-73-9-1) which had requested Senators Fulton, Dillon, and Skelton to present to President Edwards the case in favor of changing the annual leave (vacation) policy for 12-month faculty members. President Fulton had sent President Edwards a letter outlining arguments in favor of adoption of the recommended changes, and then the three Senators met on Sept. 26 with President Edwards to discuss the matter. However, President Edwards said that, due to the impending review of the University budget for 1974-1975, he had been unable to give the matter the attention he felt it deserved. He promised a decision as soon as he could examine the matter in depth.

President Fulton noted that recently there had been three symposia on campus: (1) a talk by Congressman John Anderson sponsored by the College of Liberal Arts; (2) a symposium on changes in the Southeast during the last two decades, focusing primarily on civil rights; and (3) another symposium sponsored by the Forestry Commission, the State Department of Agriculture, Clemson University, and the Governor's Office. President Fulton reported that at the latter meeting the Assistant Secretary of the U.S. Department of Agriculture had said he was impressed with the University's contract work on a health-care delivery system and with the cooperation in this matter between the University and State agencies. He even indicated that he wanted to bring people here from HEW to study the University's cooperative program.

President Fulton reported that the Educational Council at its meeting on Oct. 1 had approved a new procedure for granting scholarships and awards. Also the Council had approved the establishment of the Clemson University Housing Institute. The Institute will coordinate work being carried on by various University faculty members in the field of housing.

MINUTES OF THE MEETING OF THE FACULTY SENATE, OCT. 9, 1973 (Continued)

The Council had also approved the establishment of the Clemson University Division of Information Systems Development. In the past year state agencies have come to the University for help in record keeping and in the development of up-to-date management information and decision-making systems, since the University had the only capability in the State for formulation or revamping large data systems. Such requests seem likely to increase, President Fulton pointed out, because State agencies are subject to more accountability and because revenue-sharing funds being sent to the State require extensive planning for their use. The proposed University agency, rather than the Computer Center, will negotiate contracts. A Project Coordinating Board, reporting to Dean Schwartz, will be established comprised of Professor Merrill Palmer and Deans Anderson, Vogel, Wilcox, and Trevillian. It is expected that Computer Center personnel will be used in the contract only when they are available and that faculty and staff members working under such contracts will not only develop computer programs but will also supply their expertise in the formulation of policies and procedures for State agencies.

President Fulton also reported that it was noted at the meeting of the Educational Council that Colonel E. N. Tyndall, Administrative Assistant to President Edwards, had delivered to HEW's Atlanta office an updating of the University's "affirmative action plan" regarding efforts to reduce discrimination in hiring and promotions. He noted that the University's progress in this matter was due largely to the fact that President Edwards had served on an HEW civil rights board.

On the matter of student housing, President Edwards had told the Council that next year's freshman class may have to be smaller due to lack of housing. It is quite probable that the Clemson House will be used as a dormitory to a greater extent than it has been used in the past.

President Edwards had also said that priority will not be assigned to any proposed capital improvements on campus until space, equipment, and other needs have been developed fully and appropriate inflation multipliers have been incorporated into plans for the proposed improvement by the committee planning for the improvement.

President Fulton noted that the Board of Trustees will meet here on Nov. 18 and 19.

At the AFSC meeting on Oct. 2, President Fulton reported, Admiral McDevitt, the University Counsel, had presented some informal remarks on the University's new Class Attendance Policy. Admiral McDevitt had noted that students are required to attend class except for those reasons itemized under item (2) of the Class Attendance Policy. Although faculty members may have more lenient attendance policies than those in the Student Handbook, Admiral McDevitt said, they

MINUTES OF THE MEETING OF THE FACULTY SENATE, OCT. 9, 1973 (Continued)

must apply these policies uniformly to all students in class, and they cannot penalize students for not attending class by lowering their grades--unless the students miss some required work and fail to make it up at the convenience of the instructor. It was noted, however, that a provision allowing the dropping of a student from a course appears on page 103 of the University Announcements. A special meeting of the AFSC will be held on Oct. 23 to consider the Class Attendance Policy. The AFSC has asked Admiral McDevitt for a formal interpretation of the University's Class Attendance Policy.

President Fulton then reported on a letter he had received from Professor Corinne Sawyer objecting to the request recently made of all faculty members to report their religious preferences in order to facilitate reports by the University to HEW. Professor Sawyer and others, President Fulton stated, believed that faculty members should not be requested to provide such information, particularly since it was being stored in the computer's data bank. Professor Roberts stated that he believed it is illegal not only to require such information but also to use a person's social security number for identification purposes. At the suggestion of Professor Steirer, President Fulton turned the matter over to the Senate's Policy Committee.

President Fulton reported on a letter he had received from Professor McLean, who is a member of the Council of Presidents Committee to Investigate TIAA-CREF and S. C. Retirement System Benefits. Professor McLean had said that the committee already had met and that Dec. 19 has been set as a deadline for the committee to prepare a draft of its report. President Fulton also reported that the University Speakers Bureau is now entirely a student organization with two faculty advisors, Professors H. Adams and J. Lambert. Dean Willis' office, President Fulton reported, is now handling the Disney World faculty discounts.

President Fulton said that the Minutes from recent Senate meetings would be added to the collection in the South Carolina Room of the Cooper Library very shortly. Finally, he called the Senators attention to material he had distributed to them on problems related to no-growth policies at universities and to tenure; the material was reprinted from the Los Angeles Times for Sept. 9 and the Chronicle of Higher Education for Oct. 1.

Committee Reports

For the Admissions and Scholarship Committee the chairman, Professor Steirer, reported on a meeting which the committee members had had with Mr. Kenneth Vickery, Dean of Admissions and Registration. They had discussed the matter of transferring credits for courses taken by students at Technical Education Centers. Department Heads at the University now determine whether or not to accept transfers for courses in their areas. Professor Steirer admitted that there may be some questions as to the adequacy of these courses. He pointed out, however, that both Greenville TEC and Tri-County TEC had been accredited by the Southern



MINUTES OF THE MEETING OF THE FACULTY SENATE, OCT. 9, 1973 (Continued)

Association of Colleges and Schools, which also accredits Clemson. The question arose as to whether department heads were under duress to permit transfer of credit. Prof. Sherrill asserted that such was not the case. Prof. Steirer reported that Dean Vickery plans to do a follow-up study on students from TEC schools to determine how they fare at the University.

On the matter of summer orientation of incoming students, Prof. Steirer said that the question of whether it represented efficient use of faculty members' time was discussed with Dean Vickery. Dean Vickery had pointed out that the college deans, not his office, determine how this time is spent.

Prof. Steirer then noted the problem of budgeting money for equipment to be used for teaching purposes. Items presumably cannot be purchased unless budgeted; this procedure poses a problem when unexpected needs arise. Prof. Bauld, noting that the same difficulty occurs regarding research equipment, stated that it is uncertain right now how rigidly we will have to follow this budget rule.

Prof. Steirer then introduced a Resolution on Course Duplication. After some discussion, it was agreed that the Resolution, which originally applied only to undergraduate courses, should be applied to graduate courses as well. Thus it became the RESOLUTION ON DUPLICATION OF COURSES AND PROGRAMS (FS-73-10-1):

WHEREAS it seems to be unnecessary for the Faculty Senate to devote initial criteria for determining what undergraduate and graduate courses and programs are duplicated,

BE IT RESOLVED THAT the appropriate administrators provide the Faculty Senate with the criteria for determining what constitutes course and program duplication prior to their application.

In the discussion Profs. Cross and Bauld pointed out that studies being made by other organizations and groups on campus might well give adequate attention to the question of duplication. In response Prof. Steirer argued that such studies might result in recommendations for deletions of some courses or programs and that therefore the Senate ought to be involved.

The Resolution passed unanimously.

For the Research Committee the chairman, Prof. Bauld, reported on a meeting with Dean Schwartz about the Office of University Research. The possibility of replacing the faculty's Research Committee by a research council with expanded powers had been discussed. On the matter of indirect cost estimates for research proposals, Prof. Bauld said that he had learned that the person the committee must interview is Vice President Wilson. He noted that the complexities of the



MINUTES OF THE MEETING OF THE FACULTY SENATE, OCT. 9, 1973 (Continued)

matter really deserve the attention of someone competent in accounting techniques; in reality, he said, the University's apparently comparatively high indirect cost rate may not be that much higher than the ones used at other institutions.

For the Welfare Committee the chairman, Prof. Dillon, reported that the committee members had met with Mr. John Young regarding housing facilities for University faculty members. A report on the matter will be presented at a future meeting. Prof. Dillon also reported that he would contact Mr. McLean regarding retirement policies; Prof. Dillon believes that some policies may offer even better advantages than TIAA-CREF.

Prof. O'Dell, a member of the Welfare Committee, reported on a study being made of the 21 companies registered to sell tax-sheltered annuities on campus. Of these companies, 16 have replied to a questionnaire sent out by the committee. The results will be tabulated and presented at a future meeting.

Prof. Dillon also reported that a questionnaire is being sent out to sample faculty opinion on the matter of changing the leave policy for 9-month faculty members.

Prof. Dillon then introduced a RESOLUTION OF FACULTY APPRECIATION (FS-73-10-2):

WHEREAS the administration has made a genuine effort to bring Clemson University salaries into line with those being offered by comparable institutions in our area,

BE IT RESOLVED that the faculty of the university goes on record as being appreciative of the action taken on its behalf by university and college level administrators.

BE IT FURTHER RESOLVED that the faculty seeks continued vigorous action from the administration in making faculty salaries competitive.

The Resolution passed.

For the Ad Hoc Committee on the Motor Pool its chairman, Prof. Ezell, said that the committee is still gathering comments on Policy 5034 and will consult with the Policy Committee before making a report.

There being no further reports or other business, the meeting adjourned at 6:30 p.m.

Russell D. Shannon  
Secretary

GRADUATE COUNCIL MINUTES, OCTOBER 12, 1973

The meeting of the Graduate Council was called to order by Dean Schwartz. Those present were: Dr. Brown, Dr. Gahan, Dr. Mandel, Dr. Camper, Dr. Freeze, Professor Means, Dr. Graben (alternate for Dr. Gauthreaux), Dr. Edge (alternate for Dr. Dysart), Mr. Preston Brown and Mr. James Kelley. Dean H. E. McClure attended as a visitor.

The minutes of the September 21, 1973 meeting were approved as distributed.

Dean Schwartz introduced and recognized Dean McClure who explained and answered questions relating to items on the agenda submitted by the College of Architecture. The Council approved in principle the following requests and the representative was asked to take back to the appropriate faculty specific points for clarification, after which this information will be brought back to the Council.

Arch 859 - Terminal Project  
Statement of Requested Change in Requirements for the  
Master of Architecture Degree.

The following was also approved by the Council in principle pending specific clarification and submission of a course request for CRP 865, Planning Studio IV:

Statement Requesting Change in Requirements for the City  
and Regional Program.

The following courses and changes were approved:

Ag E	781 - Special Problems
Ag E	871 - Selected Topics in Agricultural Engineering (Repl. Ag E 801)
Ag M	771 - Selected Topics in Agricultural Mechanization
Ag M	781 - Special Problems (credit and title change)
Fd Sc	620 - Special Topics in Food Science
Engl	825 - Studies in Literary Genres
Bot	701 - Evolutionary Botany for Teachers (credit change)
Bot	702 - Modern Botanical Concepts for Teachers (credit change)
Bot	815 - Physiology Colloquim
Bot	826 - Physiology of the Fungi
Ch	700 - Physical Science in Elementary School - Chemistry (Title and description change)
Ch	702 - Chemistry for High School Teachers (Title and description change)
Ch	703 - Special Problems in Chemistry for Secondary School Teachers
Ch	840 - Techniques of Experimental Chemistry
Ch	906 - Special Topics in Inorganic Chemistry (Repl. Ch 806)
Math	815 - Data Structures
Math	850 - Computational Problems in Discrete Structures
Math	925 - Topics in Dynamical Systems
Math	989 - Special Topics in Information Processing
Phys	700 - Physical Science in Elementary School - Phys

GRADUATE COUNCIL MINUTES, OCTOBER 12, 1973 (Continued)

The following courses were tabled:

- En Sc 631 - Public Health Administration
- En Sc 632 - Inspection Methods in Water and Solid Waste

The following courses were withdrawn:

- Zool 820 - Seminar in Ecology and Behavior (Repl. Zool 812)
- Zool 821 - Seminar in Physiology (Repl. Zool 812)
- Zool 822 - Seminar in Genetics and Developmental Biology  
(Repl. Zool 812)
- Zool 823 - Seminar in Organismal and Evolutionary Biology  
(Repl. Zool 812).

Dean Schwartz commented on the procedures for graduate program review and requested that each college being reviewed appoint by November 1, 1973, two faculty members to serve on evaluation committees.

A motion was made to adjourn, seconded and approved.

MATHEMATICAL SCIENCES

J. V. Brawley (Prof) and L. Carlitz (Duke Univ) have had the following article published recently: An Addendum to the Paper, "A Characterization of the  $nxn$  Matrices over a Finite Field," American Mathematical Monthly, Vol. 80, No. 9, 1973, p. 1041.

Austin J. Lemoine (Asst Prof) has had the following article published recently: "Delayed Random Walks," Stochastic Processes and Their Applications 1(1973) p. 251.

Carl Ahlers (Asst Prof) gave an invited talk entitled, "Some theorems concerning linear models" at UNC - Charlotte on Nov. 9.

S. Karamardian (Alumni Visiting Prof) and C. B. Garcia (Asst Prof) will direct a conference on "Complementarity and Fixed Points in Mathematical Programming" to be held in Room 1 of Kinard Laboratory of Physics on Nov. 30 - Dec. 1. The Friday afternoon session, beginning at 2:00 p.m., includes talks by Dr. C. E. Lemke, Rensselaer Polytechnic Institute and Dr. O. H. Merrill, Dunne & McDonald Company, Virginia. The Saturday, Dec. 1 session, beginning at 8:30 a.m. includes presentations by Dr. R. Saigal, Bell Laboratories, N.J., Dr. K. G. Murty, University of Michigan, and Dr. B. C. Eaves, Stanford University. The afternoon session on Saturday, reconvening at 2:00 p.m. will consist of presentations by Dr. C. B. Garcia and Dr. Karamardian.

MINUTES OF ADMINISTRATION-FACULTY-STUDENT COUNCIL MEETING, NOV. 6, 1973

Chairman David Rowe called the regular meeting of the AFSC to order at 4:05 p.m. in Sikes Hall Board Room.

All members of the Council were present except Dr. William E. West.

ACTION: (Motion by Dr. Steirer) The minutes of the meeting of Tuesday, October 2, 1973 that continued on Tuesday, October 23, 1973 were approved as distributed.

Chairman Rowe summarized for the Council recent action by the Undergraduate Council on the WP, WF grading change to a simple W, indicating withdrawal.

On the subject of the class attendance regulation, the Chairman reported that the Academic Affairs Committee of the Student Senate has the subject under consideration now. Dr. Steirer advised the Council that the Admissions and Scholarship Committee of the Faculty Senate felt that the regulation should be left as it is presently written. The Council was in general consent that further discussion on the subject should await Student Senate recommendations.

Student Senate President William Findley had provided members of the Council with copies of Student Senate resolution R-73-73 "A Restatement of Final Examination Policy". The basic difference between the Student Senate resolution and a previous Faculty Senate resolution on the subject is that the latter would have left the examination policy to the discretion of the individual instructor, while the Student Senate resolution recommends the option be with the individual faculty members "with the permission of the respective department faculties." Chairman Rowe advised the Council that the Undergraduate Council had voted against the Faculty Senate resolution at a recent meeting.

The call to adjourn came at 5:05 p.m. The next meeting of the Council will be Tuesday afternoon, December 4 at 4:00 o'clock in Sikes Hall Board Room.



MINUTES OF ADMINISTRATION-FACULTY-STUDENT COUNCIL MEETINGS

OCT. 2 and OCT. 23

Chairman David Rowe called the regular meeting of the AFSC to order at 4:00 p.m. in Sikes Hall Conference Room 300.

All members of the Council were present.

There being no corrections or additions, the minutes of the meeting of Sept. 5 were approved as distributed.

Discussion was resumed on the class attendance policy statement adopted in the Spring by AFSC, Faculty and Student Senates.

Admiral McDevitt discussed the policy as presently written, and summarized it broadly as a policy that allows the individual professor or instructor to place a more liberal interpretation on it so long as that interpretation is applied uniformly to all in a class.

The Council in general consent asked the chairman to seek a written official interpretation of the policy from the University Counsel.

ACTION: (Motion by Mr. Young). Following the receipt of an official interpretation from University Counsel, the AFSC will meet in called session (Tues., Oct. 23 at 4:00 p.m., if possible) to consider further action.

ACTION: (Motion by Dr. Fulton). Inasmuch as further action on this subject should await the results of the above request, the call to stand in recess until 4:00 p.m., Oct. 23 was adopted at 5:50 p.m.

Following the recess, Chairman David Rowe called the Council to order at 4:05 p.m., Oct. 23, in Sikes Hall Conference Room 300.

All members were present except William E. Findley.

ACTION: (Motion by Dr. Steirer). A typed summary of the meeting prior to the recess was approved and will be incorporated as a part of the minutes of this two-part session.

Admiral McDevitt commented on his correspondence with the Chairman regarding the class attendance policy. He recommended that the presently stated policy be recommitted to the Faculty and Student Senates for re-statement in a format mutually agreeable to these bodies. Their product can then be referred to the AFSC for its consideration and subsequent recommendation to the President.

MINUTES OF ADMINISTRATION-FACULTY-STUDENT COUNCIL MEETINGS  
OCT. 2 and OCT. 23 (Continued)

During the recess members of the Council studied attendance regulations in effect at other schools, Miami of Florida, Florida State, Vanderbilt, University of Georgia, Furman and the University of North Carolina.

The Secretary, having been a member of the AFSC that drafted the existing class attendance policy, distributed a suggested guide to interpreting Clemson's current policy.

ACTION: (Motion by Dr. Steirer). The Council asked the Faculty and Student Senates to reconsider the class attendance policy and draft a restatement of the policy that would be more specific. The Council respectfully suggested that the Miami policy and the clarification drafted by the Secretary be used as guidelines in arriving at a restatement. (See attachment).

The next regular meeting of the Council is Tues., Nov. 6, in the Board Room of Sikes Hall.

The call to adjourn came at 5:10 p.m.

A SUGGESTED CLARIFICATION OF CLEMSON'S CURRENT CLASS ATTENDANCE POLICY

Regular and punctual attendance of all scheduled classes is an important aspect of the learning process, and every student is accountable for all work assigned in the class.

In the absence of an announcement to the contrary a policy of responsible voluntary attendance shall be presumed except for quizzes and examinations. This precludes dropping a student from a course, lowering of an academic grade or penalizing a student in some other way for absence from voluntary sessions.

Those instructors who announce a specific attendance policy are encouraged to recognize a limited number of judicious absences other than those specified in section two of the policy. A student who exceeds such authorized absences may either be placed on mandatory attendance or otherwise penalized under the provisions of scholastic regulations relating to neglect or lack of application or preparation.

COMPUTER ADVISORY COMMITTEE MINUTES, OCTOBER 10, 1973

Present: R. F. Zant, presiding; S. E. Cromer; V. R. Harrell; G. Howard; R. J. Knapp; J. S. Lytle; A. B. Marx (for K. N. Vickery); P. Monaghan; M. C. Palmer; J. C. Peck; J. L. Strom; M. Wagner; M. L. Wolla; and R. E. Chapel, recorder.

1. The minutes of the previous regular meeting were approved as submitted. A motion was passed to incorporate the following notes on a special meeting called to discuss the Division of Information Systems Development.

A special informal session of the Committee was held September 27, 1973 to discuss the proposed Division of Information Systems Development. The following questions were addressed:

What will be the impact of the new organization on the Computer Center and its usage?

What contracts are now in effect for "design, development and implementation of innovative software and information systems for agencies and organizations external to the University"?

Should the software group of the Center consist largely of personnel whose responsibilities are divided among academic departments, the Center, and the new division?

Who will be responsible for contract negotiation?

Is a conflict of interest created if the Director of the Computer Center and the director of the new division report to the same administrator, who is also principal investigator of projects assigned to the division?

What will be the effect on equipment upgrading if expected monies from external organizations do not materialize?

Why was the proposal for the new division not brought to the attention of the Computer Advisory Committee sooner?

2. Mr. Chapel was elected to the office of recorder.
3. Dr. Zant read a memo from Dean Schwartz, who was unable to attend the meeting, concerning the status of the Division of Information Systems Development. The memo noted that "the establishment of the Division as a non-administrative university wide institute has been approved in principle by the university administration."
4. In connection with questions raised relative to establishment of the new division, Dr. Wolla asked that the committee be provided information on the organizational and budgetary structure of the Computer Center, including a list of part-time faculty on the Computer Center staff. Professor Palmer agreed to provide the requested information at the next meeting.

COMPUTER ADVISORY COMMITTEE MINUTES, OCTOBER 10, 1973 (Continued)

5. A motion was passed to elect the committee chairman each year at the April meeting. The chairman will assume office July 1.
6. A list of subcommittee members for the current year was distributed:

Operations Subcommittee

C. Woodall (Chairman)  
J. Slaton  
J. Peck  
P. Crouch  
S. Lytle  
S. Cromer  
R. Zant

Technical Advisory Subcommittee

J. Gowdy (Chairman)  
R. Schouest  
D. Bruley  
P. Monaghan  
R. Zant

Non-Centralized Computing Facilities Subcommittee

F. Simon (Chairman)  
D. Miller  
M. Wolla  
R. Harrell  
R. Zant

Several attendees commented on the lack of representation on one or more subcommittees by interested divisions of the University, and made specific recommendations. Dr. Zant, noting that full representation would create unwieldy subcommittees, nevertheless said he would look into the matter.

Dr. Wolla suggested that members of the parent committee inform the chairman each year, before subcommittees are appointed, of areas of special interest to their organizations, and uniquely qualified candidates for subcommittee membership.

7. Dr. Zant expressed his desire to improve the interface between the Computer Advisory Committee and other committees and offices of the University. In the discussion that followed, several specific questions arose:

- Can the charter of the committee be more clearly defined than it is in the Faculty Manual?
- Should the committee await solicitation by the Graduate Dean (or the Director of the Computer Center as his agent) before acting?
- What is the responsibility of the committee relative to the operation of the Computer Center?

By vote of the Committee, Dr. Zant was empowered to appoint an ad hoc subcommittee to study the problem and secure a definitive charge from the Graduate Dean.



AGRONOMY AND SOILS

U.S. Jones (Prof) has been appointed to a task force by CAST - Council for Agricultural Science and Technology - to provide a written statement and oral testimony, if required, on the fertilizer situation to a joint hearing of Senator W.D. Huddleston's Subcommittee on Agricultural Production, Marketing, and Stabilization of Prices and Senator H.H. Humphrey's Subcommittee on Agricultural Foreign Policy. Dr. Jones is the only university representative on the nine man task force of authorities on production, marketing and use of fertilizers.

CHEMISTRY

J. W. Huffman (Prof) presented a seminar, "The Organic Chemistry of Ferrocene," at Bellarmine-Ursuline College, Louisville, Ky. on Oct. 29.

Recent publications: H. G. Spencer (Prof and Hd) and H. C. Honeycutt (Grad Stu), "Sorption of Water Vapor in Partially Hydrolyzed Poly J. Polymer Sci., Symposium No. 41, 129 (1973).

J. W. Huffman and S. N. Singh (Grad Stu), "Synthetic Approaches to Steroidal Alkaloids III. An Attempted Synthesis of Ring-E of Veratramine," J. Heterocyclic Chem., 10, 463 (1973).

The faculty and students provided the following contributions at the Southeastern Regional Meeting of the American Chemical Society held in Charleston, Nov. 7-9:

D. Leathers (Grad Stu) and F. Lindstrom (Prof), "Use of Reagents of the Glyoxal (2-Hydroxyanil) Class in the Spectrophotometric Determination of Indium, Scandium, Thallium, and Uranium."

R. Michael (Grad Stu) and F. Lindstrom, "A Simple, Stable, Homogeneous Spectrophotometric Microdetermination of Sulfate, Using New Chemistry."

R. Baldwin (Grad Stu) and F. Lindstrom, "The Heavy-Metal Analysis of Water in the Parts-per-Billion Range Using Non-specific Chelation, Solvent Extraction and Low-Dispersion Emission Spectroscopy."

D. Dalsis (Grad Stu) and F. Lindstrom, "An Ultraviolet Absorption Method for the Determination of Sulfur Dioxide."

R. Schack (Grad Stu) and F. Lindstrom, "An Automated Precision, Digital Titrimeter for Studying Dissociation Constants."

D. Dalsis and F. Lindstrom, "An Ultraviolet Absorption Photometer for the Continuous Monitoring of Sulfur Dioxide."

G. L. Powell (Assoc Prof) and C. Hsu (Grad Stu), "Biochemical Inactivity of (1,N<sup>6</sup>-etheno-) Coenzyme A and its Acylated Derivatives."

CHEMISTRY (Continued)

J. F. Allen (Assoc Prof) and A. K. Bonnette, Jr., "Self-Instructional Mini-courses for Teaching Nuclear Science."

E. M. Gouge (Grad Stu) and J. F. Geldard (Assoc Prof), "Metal Complexes of Unsymmetrical, Heterocyclic, Secondary Amines."

J. C. Fanning (Prof), T. L. Gray (Grad Stu) and N. Datta-Gupta, "The Reaction of Nitrogen Dioxide with Iron (III) Porphyrin Chlorides."

L. L. Dickens (Grad Stu) and J. C. Fanning, "Iron (II) Octaphenyltetraazaporphine."

H. M. McGuire, H. C. Odom and A. R. Pinder (Prof), "Further Synthetic Studies in the Eremophilane Sesquiterpene Group."

D. E. Hindman (Grad Stu) and J. Jacobus (Assoc Prof), "Micellar Catalyzed Saponification of Racemic and Optically Active Esters."

J. W. Huffman, "Hydroboration of 18-Norabieta-4,8,11,13-Tetraene."

A. L. Beyerlein (Assoc Prof) and D. J. Stanford (Grad Stu), "Thermal Diffusion Factors for the Carbon Tetrachloride-Ethyl Alcohol System."

C. V. Hinton, Jr. and H. G. Spencer (Prof and Hd), "Concentration Dependence of the Copolymerization Kinetics of the Methyl Acrylate-1,1-Diphenylethylene System."

Faculty members presiding at technical sessions: F. Lindstrom (Prof) - Analytical Chemistry; G. L. Powell (Assoc Prof) - Biochemistry session; J. C. Fanning (Prof) - Inorganic Chemistry; A. R. Pinder (Prof) - Organic Chemistry; and F. B. Brown (Prof) - Physical Chemistry.

J. F. Allen (Assoc Prof) participated in a discussion session on audio-tutorial applications in chemical education.

COLLEGE OF EDUCATION

H. F. Landrith (Dean) addressed the National Association of Classroom Teachers at their annual convention in Atlanta, Nov. 3, on The Teacher and Accountability.

H. F. Landrith delivered the main address at the annual meeting of the Southern Association of Colleges and Schools - Elementary Division, in Columbia, Nov. 8 on Accreditation and Accountability.

COLLEGE OF ARCHITECTURE

Donald Collins (Asst Prof) presented on Oct. 12 an alumni lecture to students in Landscape Architecture at the School of Design, North Carolina State University, Raleigh. Professor Collins also participated in the Conference of the National Council of Instructors in Landscape Architecture in Pine Mountain, Ga., Nov. 2-4.

David Egan (Assoc Prof) presented an engineering seminar on architectural acoustics at the University of South Carolina on Sept. 27. Professor Egan also attended the Institute of Noise Control Engineering NOISE - Con. 73 conference in Washington, D.C. on Oct. 15-16.

Joseph L. Young (Prof) has been designated vice chairman of The American Institute of Architects national committee on architecture for the Arts & Recreation.

Ireland Regnier (Assoc Prof) received a merit award in the Guild of S. C. Artist annual exhibition in Columbia.

The works of Thomas E. McPeak (Assoc Prof and Hd, Dept of History and Visual Studies) and Pamela Wright (Grad Asst) were included in the Spring Mill's Traveling Exhibit at Lancaster, S. C.

Tom Dimond (Coordinator of Educational Media and Exhibits) received a \$500 purchase award in the 39th Annual Southeastern Painting and Sculpture Exhibit at Salem College Fine Arts Center in Winston Salem, N. C.

Tom Turner (Asst Prof) has developed the first copper red vapor glaze in the history of ceramics. A vapor glazed porcelain cover jar is currently being shown in the Marietta College Crafts Regional, a juried show at Marietta College, Marietta, Ohio. Other works are currently in shows in Georgia, S. C., N. C., and New York City. Recently four works were purchased by international Embassies in the Near East, Far East, Latin America, and Africa. Twenty craftsmen were chosen by the American Crafts Council for the Embassies.

CHEMICAL ENGINEERING

D. F. Bruley (Prof) presented a seminar at Tulane University on "Systems Studies in the Microcirculation," Sept. 10.

S. S. Melsheimer (Asst Prof) presented invited seminars at Virginia Polytechnic Institute on "Membrane Separation Processes," Oct. 22, and at the University of Virginia on "Donnan Dialysis" on Oct. 23.

## ENGLISH

John J. McLaughlin (Assoc Prof) published "His Brother's Keeper: Franklin's Sibling Rivalry" in the current issue of South Atlantic Bulletin.

Barbara M. Montgomery (Instr in Speech) presented a paper, "Women in Forensics" in New York at the annual meeting of the Speech Communication Association.

Barry Hannah (Assoc Prof) on leave this year as writer-in-residence at Middlebury College, has published his second novel, Nightwatchmen. His first novel, Geronimo Rex, which was a Book-of-the-Month Club alternate choice, was nominated for the 1973 National Book Award.

Richard J. Calhoun (Alumni Prof) is the editor of James Dickey: The Expansive Imagination. A Collection of Critical Essays. Deland, Fla.: Everett/Edwards, Inc. 1973.

Richard J. Calhoun, Robert W. Hill (Asst Prof) are editors, and G. W. Koon (Asst Prof) is the managing editor of Vol. 6, No. 1 of the South Carolina Review, published Nov. 3. Included in the issue are book reviews by R. W. Hill and C. H. Woodell (Asst Prof).

John L. Idol, Jr. (Assoc Prof) read a paper entitled "Ahab and the 'Siamese Connexion'," Nov. 2 at the South Central Modern Language Association in Fort Worth, Tex.

## ELEMENTARY AND SECONDARY EDUCATION

Thomas H. Parry (Assoc Prof) is serving on the Executive Planning Committee for the Twelfth Annual Southeastern Invitational Conference on Measurement in Education. The conference is co-sponsored by Harcourt Brace Jovanovich, Inc., and Virginia Polytechnic Institute and State University and will be held in Blacksburg, Va., Dec. 7-8.

Frederick C. Raetsch (Assoc Prof) presented a paper entitled, "Vocabulary Development" (Upper Levels) at Reading Symposium VIII, Appalachian State University, Nov. 16-17.

## ELECTRICAL AND COMPUTER ENGINEERING

J. A. Chisman (Assoc Prof) made a formal presentation to the National Science Foundation in Washington, D.C., Oct. 29-30, on the NASA/ASEE Summer Faculty Fellowship Design Program on Applications of Solar Energy.



BIOCHEMISTRY

J. M. Shively (Prof and Hd) presented an invited seminar entitled, "Carboxysomes: Functional organelles in procaryotic cells" to faculty and students at the University of Kentucky, Lexington, University of Notre Dame, Notre Dame, Ind., Indiana University, Bloomington, and Purdue University, West Lafayette, Ind. the week of Oct. 29.

J. M. Shively is an author of an article entitled, "Functional organelles in procaryotes: Polyhedral inclusions (carboxysomes) in Thiobacillus neapolitanus" which appeared in the Nov. 9 issue of Science magazine. (Science 182:584-486)

CONTINUING ENGINEERING EDUCATION

A. M. Weinstein (Asst Prof, DIS) and F. W. Cooke (Assoc Prof and Hd, DIS) will teach a course in biomechanics for orthopedic surgeons at Richland Memorial Hospital in Columbia. The course with sessions from December to April prepares residents for the in-service training examination.

The ninth annual seminar on air and water pollution control sponsored by Chemical Engineering, Environmental Systems Engineering, and the South Carolina Dept. of Health and Environmental Control will focus on advance planning for future control requirements. Speakers at the Dec. 6-7 sessions include: W. F. Beckwith (Assoc Prof, Chem E), B. C. Dysart (Assoc Prof, ESE) and James M. Stepp (Alumni Prof, Ag Econ). A. R. Abernathy (Prof, ESE) and F. C. Alley (Prof, Chem E) will chair sessions.

GEOLOGY

G. M. Haselton (Assoc Prof) has received an additional grant of \$1,400 from the National Wildlife Federation to support a study in Tarr Inlet, Glacier Bay Monument, Alaska.

Recent publication: R. D. Hatcher (Assoc Prof), V. Price and D. S. Snipes (Assoc Prof), "Analysis of Chemical and Paleotemperature Data from Selected Carbonate Rocks of the Southern Appalachians," Southeastern Geology, v. 15, p. 55-70, 1973.

HISTORY

James E. Sargent (Asst Prof) presented a paper, "Franklin D. Roosevelt and Foreign Policy, 1933-1936: The Domestic-First Perspective," at the Southern Historical Association convention in Atlanta, Nov. 8.

Robert S. Lambert (Prof and Hd) has edited Records of the South Carolina Treasury, 1775-1780 (Columbia: S. C. Dept. of Archives and History).

### INDUSTRIAL EDUCATION

J. Page Crouch (Assoc Prof) presented a multi-media program on Individualizing Instruction to the Fall Conference of the Virginia Industrial Arts Association in Richmond, Va. on Nov. 3.

Clemson recently became the research and developmental party in a three way agreement with the Printing Industry of the Carolinas Foundation and the South Carolina Dept. of Education. This will provide funds for continued development of graphic arts individualized instructional materials by the Industrial Education Dept. This work has been in progress since 1970.

### INTERDISCIPLINARY STUDIES

Allan Weinstein (Asst Prof) presented a paper on "Attachment of Prostheses to Tissues" at a biomaterials symposium on the applications of polymers in dentistry and medicine at the University of Southern California, Los Angeles, Nov. 14-16.

### LIVESTOCK-POULTRY HEALTH DEPARTMENT

Thomas H. Eleazer (Veterinarian) presented a paper entitled, "Early Chick Mortality" at the Southeastern Poultry and Egg Association's Poultry Health Seminar held in Atlanta, Ga. on Oct. 29-30.

### RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) led a seminar in Greensboro, N. C., Nov. 12 and 13 for the Annual Conference of the North Carolina Recreation and Park Society. The topic was "Management by Objectives in Recreation." Participation was limited to administrators in the field.

Jack Stevenson (Assoc Prof) has been elected Chairman-Elect of the Southern Region of the American Camping Association. Composed of eleven southern states from Texas and Oklahoma east including and below Tennessee and North Carolina, the Southern Region is one of five Regions in A.C.A. Stevenson will continue to be a member of the A.C.A. National Board of Directors representing the Region he will chair.

### UNIVERSITY COUNSELING CENTER

Dr. John F. Mulkeen was invited to the 22nd Annual National Conference of University & College Counseling Center Directors held at West Virginia University in Morgantown. He became a member of a task force studying college and university counseling center accreditation.

Dr. Fred Steele was moderator for the "Counseling Center Idea Exchange" at the Southeastern Conference of Counseling Center Personnel held on October 26-28, 1973 in St. Petersburg Beach, Florida.

December 1, 1973

CALENDAR OF CAMPUS EVENTS

- 2 -- University Union Fine Arts Film: "Birth of a Nation," Holtzendorff YMCA, 8 p.m.
- 3-21 -- College of Architecture Exhibition: Charles Warren Callister, a photographic exhibit of the principal projects of this San Francisco Bay area architect, Lee Gallery
- 4 -- University Union Concert: St. Louis Jazz Quartet, a program of musical swing, Tillman Auditorium, 8 p.m.
- 5 -- Seminar: Dr. Peter J. Barry, Texas A&M, "Financial Dimensions of Business Management in Agriculture," presented by Department of Agricultural Economics and Rural Sociology, Room 1 Kinard, 3 p.m.
- 6 -- Clemson University Woman's Club, Clemson House, 3:45 p.m.
- 6 -- Architecture Film Series: "Mystery of Stonehenge," Lee Auditorium, 8 p.m.
- 5-9 -- Clemson Little Theater Production: "Brimstone" by noted Broadway playwright Howard Richardson, Food Industries Auditorium, 8 p.m.
- 6-7 -- Ninth Annual Seminar on Air and Water Pollution Control: Advance Planning for Future Control Requirements, Holiday Inn
- 8 -- Graduate Record Examination
- 9 -- University Union Film Series: "Movie Orgy," film clips from past great movies, Holtzendorff YMCA, 7 p.m.
- 10 -- Exams begin
- 12 -- Short Course: Upgrading the Performance of Sewage Lagoons, 302 Rhodes Engineering Research Center
- 15 -- Basketball: Georgia Tech, here
- 15 -- Architectural School Aptitude Test
- 15-Jan. 10 -- Architectural Exhibition: "Student Exhibit," an exhibition of work by students in the College of Architecture, Lee Gallery
- 18 -- Basketball: Louisville, here
- 20 -- Mid-year graduation





Clayton

NEWSLETTER/CALENDAR DEADLINES FOR  
DECEMBER AND JANUARY ISSUES

To meet holiday schedules, the "Clemson Newsletter" and "Calendar" will be prepared and published according to the following deadlines:

December 1st Issue: Deadline was November 20; contains known calendar items for period December 1 through December 31.

December 15th Issue: Deadline will be December 5; will contain calendar items for period December 15 through January 15.

There will be no January 1 issue.

Regular schedule will resume with the January 15 issue. Deadline for this issue will be January 5.

# CLEMSON UNIVERSITY NEWSLETTER

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 9

December 15, 1973

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SOUTH CAROLINA ROOM

DEC 14 1973

## Phase II of Faculty/Staff Parking Policy Effective January 1, 1974

President Robert C. Edwards' letter of August 14, 1973, to faculty and staff announced that Phase II of the new University Parking Policy would go into effect in early January. Adm. Joseph B. McDevitt, vice president for executive affairs, recently announced that actions to implement the new non-reserved parking plan have been completed.

To provide maximum flexibility to faculty and staff, the campus has been divided into two parking zones -- East and West (see accompanying map). Work will begin as soon as possible, to paint out the Reserved Parking Spaces by January 1, 1974. However, if upon return from the holidays this work has not been completed, faculty and staff will nevertheless operate under the new plan. There will be no reserved parking after that date, and vehicles should be parked either in East or West areas, as appropriate.

Faculty and staff having a need to travel by vehicle to other than their zone should use TIMED parking. The restrictions on ZONE, TIMED and VISITOR parking will be in effect between 7:30 a.m. and 5:00 p.m. Faculty and staff and their families should not use VISITOR parking until after 5:00 p.m.

Since the faculty and staff will be engaged in registration activities beginning January 7, 1974, new decals for either East or West zone will not be issued until January 14. At this time Chief Jack W. Weeden will begin issuing decals at the departmental level.

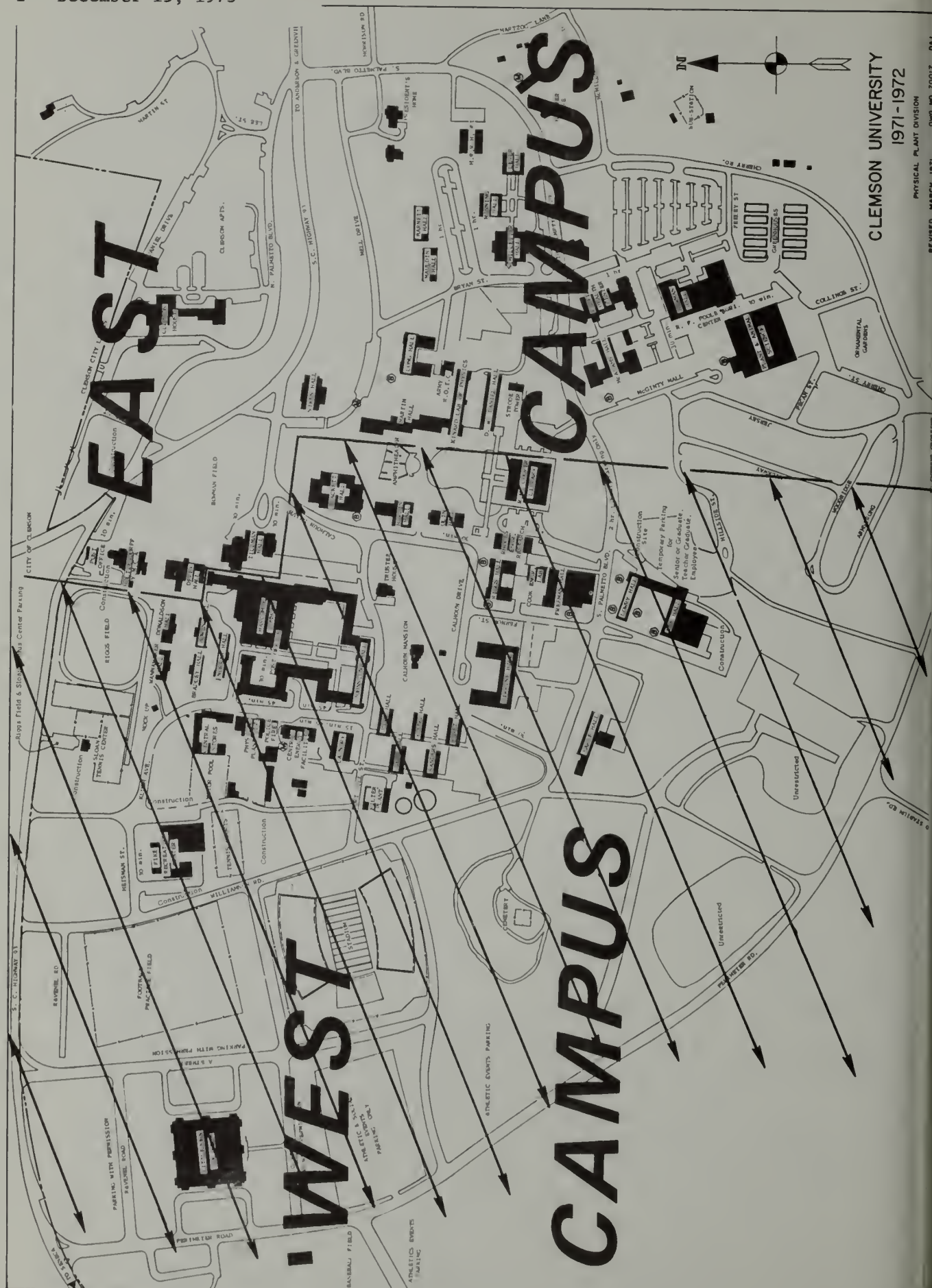
Those individuals not obtaining decals during Chief Weeden's visits to the departments may later obtain them at the Police Station. Due to the considerable difficulty experienced in removing old decals, it is suggested that the new decal be placed directly over the old decal.

Announcement of the commencement date for enforcement of the new parking policy will be made subsequently.

Your cooperation during this period of transition will help greatly in making the change with the least inconvenience possible to everyone involved.  
(See map on page 2.)

## Class Attendance Policy Clarified

For purposes of clarification, the Administration-Faculty-Student Council wishes to point out that the item headed "A SUGGESTED CLARIFICATION OF CLEMSON'S CURRENT CLASS ATTENDANCE POLICY" published on page 28 of the December 1, 1973, Clemson University Newsletter, was an attachment to the minutes of the AFSC meeting of October 2, continued on October 23 (which immediately precede this item on that same page). It was not a recommendation by the AFSC as an official clarification of the class attendance policy.





MINUTES OF UNIVERSITY SCHEDULE COMMITTEE, NOVEMBER 8, 1973

The Schedule Committee met in Room 118, Brackett Hall with the following present: K. N. Vickery (Chairman), W. L. Ball, B. M. Cool, C. C. Davis, A. C. Brock, R. C. Harshman, J. Alex Hash, Louis Henry, H. G. Lefort, C. M. McGee, Julia Higgins, J. R. Salley, W. S. Chapman, W. C. Whitten, Jr. Doreen Giger, David Fleming.

The University Schedule Committee met on November 8 to consider course approval requests for MS 101, 102, 201, and 202. These requests were referred to the Committee by the Undergraduate Council since they involve exceptions to current schedule policies.

Specifically, the Department of Military Science is requesting permission to schedule two-hour laboratory periods once every two weeks rather than a one-hour period each week. It was noted that these periods involved issuance and turn-in of weapons and other special equipment, and that two-hour periods would afford more actual training time without any increase in total laboratory time.

Dr. Henry moved, Dr. Harshman seconded, that in consideration of the special nature of the course, the added benefits to be derived, and the relatively small number of students involved, that the Committee recommend approval of this exception to current schedule practices.

The motion passed.

The Schedule for preparation of First Semester 1974-75 schedules was distributed. This schedule format is similar to the one approved for the current semester with minor modifications suggested at the last committee meeting.

February 7	Schedule Committee Meeting Schedule Booklet materials sent to departments
February 21	Schedule Booklet materials returned by departments
March 4	Schedule proofs back to departments
March 8	Schedule Booklet copy to printers
March 11	Examination Schedule published
April 15-19	Pre-registration (Faculty available April 16, 17, 18)
April 21	First editing run
April 23	Initial planning report to departments
April 29	Examinations begin
May 10	Commencement
May 14	First preliminary scheduling run

MINUTES OF THE SCHOLARSHIPS AND AWARDS COMMITTEE, OCTOBER 10, 1973

The Scholarships and Awards Committee met at 3:30 p.m. in Room E-103 Martin Hall with Chairman Corinne Sawyer presiding. Committee members absent were A. M. Bloss and P. A. Steiner.

The first order of business proposed by Dr. Sawyer was the nomination of a secretary for the Committee. Dr. Alfred L. Recoulley, Committee representative from the College of Liberal Arts, was nominated and elected.

The second order of business proposed by Dr. Sawyer was the approval of nominees for Who's Who Among Students in American Colleges and Universities. Dean Vickery moved that the selections made by the Scholarships and Awards sub-committee be approved as submitted by the sub-committee. The motion was seconded. Committee members briefly discussed the composition and procedures of the sub-committee. Then the motion carried unanimously.

There being no further business, the meeting was adjourned at 3:55 p.m.

Alfred L. Recoulley, Secretary

MINUTES OF THE UNIVERSITY FINE ARTS COMMITTEE, NOVEMBER 20, 1973

The University Fine Arts Committee met in Room 108 Strode Tower at 3:30 p.m. on November 20, 1973, Chairman John H. Butler presiding. All rotating membership present except Mr. Hubbard and Dr. Hill, all student membership present except Miss Murtiashaw. Mr. Hartzog of the University Union was present as a guest.

Financial reports for activities in the purview of the Committee for 1972-73 were presented, and a budget for the current academic year was presented.

Possible attractions for the 1974-75 Concert Series were discussed, and a list of recommended attractions was formulated. Chairman Butler was empowered to begin arranging the 1974-75 season following recommended attractions. The meeting adjourned at 4:45 p.m.

CLEMSON PROFESSORS ATTEND PHI BETA KAPPA INSTALLATION AT FURMAN UNIVERSITY

Dean C. B. Green (English), Dean H. M. Cox (English), Dr. Corinne Sawyer (English), Dr. J. L. Arbena (History), and Dr. C. A. Grubb (History) attended the installation ceremony for the Gamma of South Carolina Chapter of Phi Beta Kappa at Furman University on Dec. 5, 1973.

## CIVIL ENGINEERING

Herbert W. Busching (Assoc Prof and Hd) and Donald H. Hamilton (Grad Stu) will present "The Design of Two Low-Cost Basic Homes" at the Third International Symposium on Lower-Cost Housing Problems, May 27-30, 1974, Montreal, Canada.

Freddy L. Roberts (Asst Prof) and Joseph P. Rostron (Prof) have received confirmation from the South Carolina Highway Dept. and FHWA of the funding of a \$60,000 research project, "A Program for Improvement of Bituminous Surface Treatments on South Carolina Secondary Highways" which will begin Jan. 1.

Jackson S. Love (Asst Prof) presented a paper, "Nonlinear Mechanics of the Canine Thoracic Aorta" to the Society for Engineering Science at North Carolina State University in Raleigh, Nov. 5-7.

Donald B. Stafford (Assoc Prof) has advanced from Associate Member to the grade of Member in the American Society of Civil Engineers.

## COLLEGE OF EDUCATION

H. F. Landrith (Dean) served as chairman of the State Department of Education Evaluation Committee reviewing the School of Education at Winthrop College on Nov. 13 and 14.

## COLLEGE OF ENGINEERING

J. Charles Hester (Assoc Prof and Hd, ME) assumed the duties of Associate Dean of Engineering Dec. 13. Dean L. C. Wilcox has also announced that Dr. Hester will serve concurrently as Acting Head of Mechanical Engineering.

Dr. Hester, who received his advanced degrees from Oklahoma State University joined the Clemson University faculty in 1970 and became Head of Mechanical Engineering in Feb. 1971. His research interests center on energy conversion processes and components.

Associate Dean Hester will be responsible for long-range college planning and special program development and coordination. He will serve as liaison with industry and governmental agencies regarding grants and contracts.

## COLLEGE OF ENGINEERING (Continued)

In mid-November some forty engineer/executives from across the country - members of the Advisory Board to the departments of Agricultural Engineering, Chemical Engineering, Civil Engineering, Electrical and Computer Engineering, and Mechanical Engineering - spent a working week-end on the University campus.

The Advisory Boards were recently formed to stimulate interaction between practicing engineers and the academic community. These meetings were a first-time experience for all but the Department of Agricultural Engineering which has been meeting with men in agribusiness since the fall of 1970.

After a crash program of introduction to the College of Engineering, the Board members sat down to assess the University's engineering programs. They were specifically charged with seeing that the College of Engineering produces graduates which keep the University in the forefront of professional engineering education.

In summarizing their experiences for Dean Lyle C. Wilcox they emphasized the need to simulate on campus the professional world the engineering student will enter after graduation. According to their report, an effective engineering curriculum should reflect those skills which contribute to an engineer's success on the job - proficiency in written and oral communication, design experiences, and management techniques.

In analyzing the goals and objectives of the College, each Board made detailed recommendations to department heads on research, classroom teaching, medium and long-range objectives, professional development for the faculty, continuing engineering education, and promotion of the role of the engineer in modern society.

## ENTOMOLOGY AND ECONOMIC ZOOLOGY

The following attended the National ESA meetings in Dallas, Texas, Nov. 2-30, and presented papers based on their research studies: G. R. Carner (Asst Prof), R. Holloway (Asst Prof), Merle Shepard (Asst Prof), D. K. Pollet (Asst Prof) and Graduate Research Assistants, J. Roger Ables, Gary Newman, Van Waddill. T. E. Skelton (Assoc Prof) attended the meetings and served on a panel discussion on "Innovations and New Concepts in Entomological Education." H. M. Henry (Ph.D. graduate, June 1973) and T. R. Adkins, Jr. (Prof) presented a paper on "ULV Malathion for Deer Fly Control in Recreational Areas of Coastal South Carolina."



CONTINUING ENGINEERING EDUCATION

The department of Ceramic Engineering is sponsoring a short course for foremen, superintendents, and technicians in brick manufacturing plants, Jan. 7-11. Instructors for the classroom and laboratory sessions are: G. C. Robinson (Prof and Hd), W. W. Coffeen (Assoc Prof), C. C. Fain (Assoc Prof), H. G. Lefort (Assoc Prof) and H. H. Wilson (Prof).

A short course on the heat treatment of steels for persons in the metallurgical field will be presented in a series of fifteen Monday evening sessions at Spartanburg TEC beginning Jan. 14. Continuing Engineering Education and the Old South Chapter of the American Society for Metals are sponsoring the classes in cooperation with the Adult Continuing Education Division of Spartanburg TEC. Instructors are: J. S. Wolf (Assoc Prof, DIS), A. M. Weinstein (Asst Prof, DIS), and F. W. Cooke (Assoc Prof and Hd, DIS).

Registration for evening courses in the College of Engineering is scheduled for Jan. 8. Twenty-four graduate courses and ten undergraduate courses are being offered by the departments of Mechanical Engineering, Chemical Engineering, Engineering Mechanics, Civil Engineering, and Interdisciplinary Studies.

ECONOMICS

Hugh Macaulay (Alumni Prof) delivered a paper on "Solutions to Pollution" as a part of the Student Lecture Series at Texas A&M University, Dec. 6.

Rodney H. Mabry (Instr) gave a lecture to Wofford College economics students and faculty on Nov. 15. The subject was "An Application of Leibenstein's Bandwagon Effect to the Elasticity of Demand for Legal Services."

ELEMENTARY AND SECONDARY EDUCATION

Gordon Gary (Prof) presented a program at the Appalachian State University Reading Conference, Nov. 17 entitled, "Immediate Reinforcement of Reading Skills: A Demonstration." Dr. Gray also presented in-service programs for the Edwards Junior High School English faculty on Oct. 19 and for the Abbeville Title I Reading teachers on Oct. 25.

Elizabeth B. Galloway (Asst Prof) and Gordon Gray have published a comprehensive reading program entitled, "IT," Individualized Teaching.

Elizabeth B. Galloway (Asst Prof) served on the State Adoption Committee for Books for Secondary Remedial Reading.

ELEMENTARY AND SECONDARY EDUCATION (Continued)

Elizabeth B. Galloway was program chairman, Nov. 8 for South Carolina Elementary Schools, Southern Association for Accreditation.

Elizabeth B. Galloway presented a speech on "The Role of Children's Literature in the Teaching of Reading" Nov. 10 at the Literature Symposium, sponsored by the English dept. Dr. Galloway also presented a speech entitled, "Reading and Children's Literature" at the Appalachian Reading Conference, Boone, N.C., Nov. 17.

Elizabeth B. Galloway has been appointed as a member of the advisory board for the reading program for Greenville Technical Education Center.

Barbara M. Raetsch (Asst Prof) conducted a two-day in-service program on "Teaching Reading in the Content Areas" for the faculty at J. L. Mann High School in Greenville.

Barbara M. Raetsch presented a program entitled, "Higher Level Comprehension Skills" at the Appalachian State University Reading Conference, Nov. 16-17.

ENGLISH

John Idol (Assoc Prof) published a review of The Short Fiction of Caroline Gordon: A Critical Symposium in the current issue of Studies in Short Fiction.

At the annual meeting of the South Atlantic Modern Language Association in Atlanta, Jerome Mandel (Assoc Prof) was chairman of the Old English section. In other sections, papers were presented by Albert Holt (Assoc Prof) and William Koon (Asst Prof).

C. L. Montgomery (Instr in Speech) is president of the S. C. Speech Communication Association. In addition to presiding at the recent annual meeting in Columbia he directed the program on "Extemporaneous Speaking in S. C. High Schools."

A. J. Fear (Assoc Prof of Speech) as chairman of the Speech Teacher of the Year Committee, presented the award at the meeting.

Janice Sargent (Instr in Speech) read a paper, "A Summary of Small Research Related to Sex Differences," at the same convention.

The Forensic Union, sponsored by the English dept. will present four programs in January on the energy crisis for the South Carolina Educational Radio Network.

## GEOLOGY DEPARTMENT

At the annual meeting of the Geological Society of America in Dallas, Tex., Nov. 12, the following papers were presented:

V. S. Griffin, Jr. (Assoc Prof), "Suprastructural to infrastructural transition on the backside of the mobile thermal core of the Southern Appalachian orogen."

R. D. Hatcher, Jr. (Assoc Prof), "North American paleozoic foldbelts and deformational histories: A plate tectonics anomaly?"

## HISTORY DEPARTMENT

E. M. Lander, Jr. (Alumni Prof) reviewed R. W. Johannsen's Stephen A. Douglas and Lewis Perry's Radical Abolitionism in the Annals of AAPSS, Sept. 1973; reviewed Mary Stevenson's The Dairy of Clarissa Adger Bowen, Ashtabula Plantation, 1865 in the S. C. Historical Magazine, Oct. 1973.

## HORTICULTURE

R. J. Ferree (Assoc Prof) served as General Chairman of the Cumberland-Shenandoah Fruit Workers Conference at their 49th annual meeting held in Winchester, Va., Nov. 15-16.

J. R. Haun (Assoc Prof) had a paper entitled, "Determination of Wheat Growth-Environment Relationships" published in Agronomy Journal 65:813-816.

J. R. Haun conferred with members of the World Meteorological Organization in Geneva, Switzerland on methods for research on environmental physiology in under-developed countries, Oct. 18-19.

J. R. Haun participated and presented a paper at a Symposium entitled "Agrometeorology of the Wheat Crop" sponsored by the World Meteorological Organization in cooperation with the Federal Republic of Germany at Braunschweig, West Germany, Oct. 22-27. The title of his presentation was "Evaluation of Wheat Development Relative to Environment from Quantitative Morphological Data."

J. R. Haun presented a lecture on "Quantitative Exposition of Plant Development" to members of the Dept. of Botany, University of Cambridge, Cambridge, England, Oct. 29.

J. R. Haun presented a review of research on wheat yield prediction methods to members of the NASA Johnson Space Center, Houston, Tex., Nov. 21. Methods were discussed for adapting remotely sensed atmospheric data from satellites to yield prediction models.

## INDUSTRIAL MANAGEMENT

James A. Turner, Jr. (Assoc Prof), Richard Calvasina (Asst Prof) and Happy Pierce (Instr) presented the following three papers to the South Carolina Association of Public Accountants Annual Professional Seminar, Oct. 25-26:

(1) Invested Capital - An Overview; (2) A Current Survey of Internally Generated Capital; (3) Contingencies Today and Their Financial Statement Presentation.

## LANGUAGES

Carey Stacy (Visit Lect in Spanish) participated in a program "The Need to Know in ESL" sponsored by the National Association for Foreign Student Affairs in Winston Salem, Nov. 1-2.

## MATHEMATICAL SCIENCES

W. H. Ruckle (Prof) presented a colloquium talk to the mathematics faculty of Lehigh University on Nov. 20, entitled "Sum Spaces."

W. H. Ruckle and Nigel J. Kalton of University College of Swansea, England have had the following article published recently: "A Series characterization of subspaces of  $L_p(\mu)$  spaces," Bulletin of the American Mathematical Society 79(1973) p. 1019.

The following faculty members presented papers at the Southeastern Regional Meeting of American Mathematics Society in Atlanta on Nov. 16-17:

Nov. 16 - James A. Reneke (Assoc Prof) - "The existence of realizations of hereditary systems."

Andrew Sobczyk (Samuel Maner Martin Prof) - "Factorization of certain decimal integers."

Nov. 17 - T. G. Proctor (Assoc Prof) - "Bounds for solutions of perturbed differential equations."

Renu Laskar (Assoc Prof) - "On  $r$ -partite graphs," (written jointly with Bruce Auerbach).

W. R. Boland (Assoc Prof) - "Ordinary differential equations in neutron transport theory," (written jointly with P. Nelson, Jr. (Prof, Texas Tech Univ).

W. R. Hare (Prof) - "The chromatic polynomial of a complete  $r$ -partite graph," (written jointly with Renu Laskar).

J. V. Brawley (Prof) - "Power sums of matrices over a finite field," (written jointly with L. Carlitz, Duke Univ and J. Levine, N. C. State Univ).

Stepan Karamardian (Alumni Visit Prof) - "Complementarity problems over cones with monotone and pseudo-monotone maps."



PHYSICS AND ASTRONOMY

R. L. Chaplin (Prof) and Peter Jung, Institut fur Festkorp̄rforschung, Kernforschungsanlage Julich had a paper published in Phys. Stat. Sol. (a) Vol. 19, K 31, 1973 entitled, "Subthreshold Radiation Effects in Platinum."

B. V. Bronk (Assoc Prof) gave a talk at the University of Georgia at Athens on Nov. 29 entitled, "Some Aspects of Self Kinetics."

POLITICAL SCIENCE AND SOCIOLOGY

Ronald J. Knapp (Asst Prof) has published a review of Clinics, Contraception, and Communication: Evaluation Studies of Family Planning Programs in Four Latin American Countries, by J. M. Stycos, in Southeastern Latin Americanist, XVII, 2, 13-14, (Sept. 1973).

Martin Slann (Asst Prof) has published a review of A Land Of Our Own, by Golda Meir, in Perspective, Vol. 2, 5, (May, 1973).

TEXTILE DEPARTMENT

E. I. Stearns (Prof and Hd) has been appointed Secretary of the National Council for Textile Education for the year 1974.

E. I. Stearns lectured to the student chapter of the AATCC, Nov. 8 on the subject, "Textile Test Methods."

On Nov. 14, the Dept. of Textiles was host to 52 high school seniors in observance of "Science in Textiles Day." They discussed textiles as a career.

E. I. Stearns has been appointed to the Advisory Committee of Tri-County Technical Education Center.

John D. Hatcher (Asst Prof) and Donald W. Lyons (Assoc Prof) have received a grant from the South Carolina Dept. of Corrections to develop safety and health programs for correctional institutions and prison industries. This grant of \$15,000 is for the second year's work on a program initiated in 1972.

Donald W. Lyons presented a paper at the Georgia Cannery Association Meeting in Jacksonville, Fla. The paper emphasized the OSHA requirements as they apply to the food processing industry.

Donald W. Lyons presented a lecture in the short course on "Principles and Techniques of Machine Guarding," sponsored by the American Society of Safety Engineers at North Carolina State University.

### UNIVERSITY UNION PROGRAMS

Buford Trent, Director of the University Union and YMCA, is a member of the National Board of Directors of YMCA's. Mr. Trent participated in a meeting of the Board recently at Estes Park, Colorado. Following that meeting, he attended a conference of the Association of College Unions-International (ACU-I), Region Five, at Memphis State University, Tennessee.

Otis Nelson, Director of the Foreign Student Office, participated in a Volunteer Services Workshop recently at the University of Chicago.

Art Hartzog, Union Program Director, was a conference facilitator at the Region Five Conference of the Association of College Unions-International. The facilitators worked with a team of three experts in the field of college programming, utilizing special group techniques for the development of programming philosophy and goals. Six Clemson students also participated in the conference at Memphis, Tennessee.

### ZOOLOGY

Richard F. Walker (Asst Prof) presented a research paper entitled, "Pineal Hydroxyindole-O-Methyltransferase Activity During Pregnancy in Hamsters" at the Southeastern Conference in Comparative Endocrinology on Nov. 16, which was held at Duke University Marine Laboratory, Beaufort, N. C.

Sidney A. Gauthreaux, Jr. (Assoc Prof) recently attended the 91st meeting of the American Ornithologist's Union at Provincetown, Mass. and delivered a paper entitled, "Solar Radiation, Light Intensity and Roosting Behavior in Birds." The meeting was in conjunction with the Centennial of the Nuttall Ornithological Club.

Hong S. Min (Prof and Hd) and Doris R. Helms (Asst Prof) attended the meeting of the American Society for Cell Biology, which was held in Miami, Fla., Nov. 14-17.

Dong P. Yu (Visit Asst Prof) attended the Southeastern Conference in Comparative Endocrinology at Duke University Marine Laboratory, Beaufort, N. C., Nov. 16-17.

Averett S. Tombes (Assoc Prof) was co-director with John Costlow of Duke University of the Regional Comparative Endocrinology Conference which was sponsored by the American Society of Zoologists. The conference was held at Duke University Marine Laboratory, Beaufort, N.C., Nov. 16-17. Also attending the conference were the following Zoology Graduate Students: Cynthia B. Johnson, F. Simons Hane, J. Michael Johnson, Franklin C. Lee.

December 15, 1973

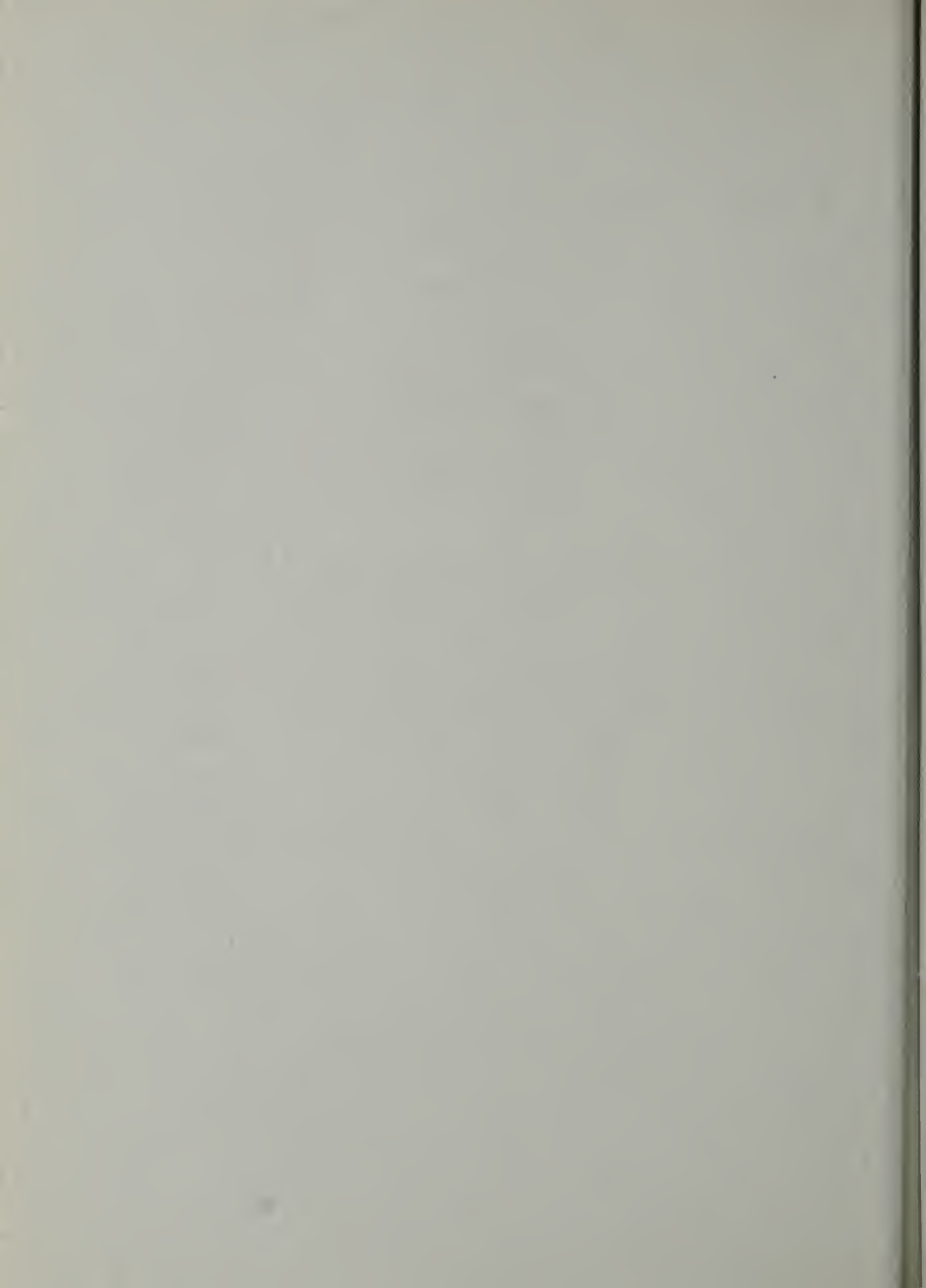
CALENDAR OF CAMPUS EVENTS

December

- 15 -- Basketball: Georgia Tech, here
- 15 -- Architectural School Aptitude Test
- 17-Jan. 10 -- Architecture Exhibit: "Student Exhibit," an exhibition of work by students in the College of Architecture, Lee Gallery
- 18 -- Basketball: Louisville, here
- 20 -- Mid-year graduation

January

- 7 -- Short course in construction safety
- 7-11 -- Short course for brick manufacturers
- 8 -- Registration for evening graduate courses in the College of Engineering
- 8 -- Spring Semester Registration, all students
- 9 -- Basketball: North Carolina, here
- 10 -- Clemson University Woman's Club, Clemson House, 3:45 p.m.
- 10-25 -- Architecture Exhibit: photographic exhibit of "Mount Angel Library," Lee Gallery
- 12 -- Dental Aptitude Test
- 13-Feb. 1 -- Architecture Exhibit: "John Kehoe -- Sculptor -- One Man Show," art exhibit of recent sculpture and drawings by this University of Georgia sculptor, Lee Gallery
- 14 -- Spanish Film, Daniel Auditorium, 7 p.m.
- 14 -- Conference: Heat Treatment of Steels, first of a series of 15 Monday evening sessions at Spartanburg TEC
- 15 -- Speakers Bureau: Vice President Gerald Ford, Tillman Auditorium, 7 p.m.







HOLIDAY SCHEDULE FOR NEWSLETTER

This issue contains the known calendar items through January 15.

There will be no January 1 issue.

Regular schedule will resume with the January 15 issue. Deadline for this issue will be January 5.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 10

CLEMSON

LIBRARY

SOUTHERN ROOM

January 15, 1974

## Without Moral Commitment Education Is Dangerous, Edwards Tells Graduates

Clemson University President Robert C. Edwards told a mid-year graduation class of 436 Dec. 20 that national events during the past traumatic year have shown again the danger of education that emphasizes knowledge without a strong sense of moral commitment.

Edwards spoke of "the crisis of confidence and lack of credibility which now exist toward many of our leaders in public service, particularly government, and regretably to some leaders in business and industry, who have betrayed their trust."

What was missing on the part of these talented, highly educated leaders was "not a lack of knowledge but a failure to act in a morally just and ethical manner," he said.

In the long run it must be knowledge in the hands of "responsible people" that will solve problems like the energy crisis and restore faith in the American system, Edwards told the graduates, who received 104 bachelor's, 2 associate in arts, 108 master's and 22 doctoral degrees.

In these times of grave doubt and despair about the future of our society, no institution of higher learning can move through the ceremonial rituals of graduation without pausing to reflect of how well it has served those who are being graduated, and the society into which they are going. Education that is worthy of the name does bear a relationship to conduct," Edwards said.

During the ceremonies Clemson awarded diplomas to a record 13 postgraduate students in environmental systems engineering, awarded the first bachelor's degree in its textile technology curriculum (to Chuck

Huntley of Greenwood), and noted a remarkable achievement in awarding a bachelor's degree in animal science to John W. Snyder of Seneca, who received his diploma after only two years and four months of concentrated study.

Sixty-nine students, some 23 per cent of the graduating seniors, were cited outstanding scholastic achievement.

Twenty-two Clemson University ROTC cadets were commissioned second lieutenants during the commencement exercises.

Including graduation ceremonies in May and August, Clemson awarded 1,892 degrees during 1973, a 12 per cent increase over 1972.

## IMPORTANT INFORMATION

The following information concerns your Health Insurance Program (Blue Cross - Blue Shield) and Travelers Insurance Programs.

The annual rework period (open enrollment) this year will be from January 22, 1974 through February 22, 1974. A computer generated printout indicating the current status of State Health Insurance Program coverage will be sent to each eligible employee. Any changes from present coverage and/or any new applications must be made during the open enrollment period.

Travelers Insurance rework period will also be from January 22, 1974 through February 22, 1974. Call 656-2000 for an appointment with the Travelers representative - Al Campbell.

FOR INFORMATION CONCERNING INSURANCE PROBLEMS OR THE OPEN ENROLLMENT PERIOD CALL 656-2000 or CONTACT Clemson University, Insurance Office, G04 Sikes Hall, Clemson, S.C. 29631.

## Major News Topics Aired From Clemson on Educational Radio

Two of the hottest news topics of 1974 -- "Energy in the United States: Can We Avoid a Crisis?" and "The Future of the American Presidency" -- will be discussed in a series of public service programs broadcast on the S.C. Educational Television and Radio Networks during January and February.

The programs are produced by Clemson University.

Beginning Jan. 9 is a four-part debate on the energy crisis featuring the Clemson University Forensic Union over the state radio network (90.1 FM in Greenville and 89.3 FM in Charleston).

Topics of the debates, to be aired succeeding Wednesdays at noon and 7:45 p.m., are "The Scope of the Energy Crisis" (Jan. 16), "Nuclear Energy: Will it Meet the Need?" (Jan. 23), and "Solar Energy and Other Fuel Alternatives" (Jan. 30).

Clemson Forensic Union members traveled some 19,485 miles to 19 tournaments last year, winning first place over 50 competing schools in the National Public Contest for Public Discussion. At the national 1973 Student Congress two Clemson students were recognized as national champions.

On Saturdays at 6:30 p.m. the S.C. Educational Television Network (UHF) will feature programs of the Clemson College of Liberal Arts' popular 1973-74 "The Future of the American Presidency" lecture series.

Programs scheduled are "A Republican Looks at the Presidency" by U.S. Cong. John B. Anderson (R-Ill.) on Jan 12; "A Democrat Looks at the Presidency," U.S. Con. Morris K. Udall (D-Ariz.), Jan. 19; "Beyond the Textbook Presidency," Thomas E. Cronin, former White House aide to President Johnson, Jan. 26.

Also, "Predicting Presidential Character," James D. Barber, head of Duke University's political science department, Feb. 2;

"Elitists' Perceptions of Presidential Performance," Malcolm B. Parsons, professor of government at Florida State University, Feb. 9; "Congress and the Making of Presidential Candidates," Robert Peabody, professor of political science at Johns Hopkins University, Feb. 16.

Also, "The President's Foreign Policy Machine," Marian D. Irish, Senior Fellow at the Woodrow Wilson International Center for Scholarship, Feb. 23; and "The Institutionalization of the Presidency," Dorothy James, political science professor at Lehman College, March 2. Three other programs in the series may be taped and broadcast in late March and April.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, DECEMBER 3, 1973

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Walter T. Cox, Luther P. Anderson, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, K. N. Vickery, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis, and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of November 5, 1973 were approved as submitted.

2. Curriculum Changes

Statement and Recommendation: The Dean of the University recommends additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

## I. COLLEGE OF ARCHITECTURE

A. Graduate Course - Change in Credits

CRP 865      Planning Studio IV, 3-9 cr.

B. Change in Requirements for the Master of City and Regional Planning Degree

## 1. Thesis Option:

- a. A minimum of 51 hours of course work in the student's prescribed professional curriculum excluding the thesis.
- b. Satisfactory completion of a 9-credit hour planning thesis while in residence as a full-time student. Only those students with demonstratively satisfactory planning experience will be permitted this option. This will be determined by examination, both written and oral.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, DEC. 3, 1973 (Continued)

2. Non-Thesis Option:

- a. A minimum of 60 hours of course work in the student's prescribed professional curriculum in the graduate studies program including the four planning studio courses--
  - CRP 853 Introduction to Planning Studio
  - CRP 854 Planning Studio II
  - CRP 863 Planning Studio III
  - CRP 865 Planning Studio IV

III. COLLEGE OF EDUCATION

A. Undergraduate Course Changes:

InEd 435 Advanced Industrial Metalworking Practices, 3 cr (2 and 3)  
(Extension of InEd 203.)

InEd 440 Advanced Techniques of the Graphic Arts, 4 cr (2 and 4)  
(Credit increase to 4 cr from 3 cr.)

B. Graduate Course Changes:

InEd 635 Advanced Industrial Metalworking Practices, 3 cr (2 and 3)  
(Change in title, credit and hours.)

InEd 640 Advanced Techniquet of the Graphic Arts, 4 cr (2 and 4)  
(Credit increase to four credits from three.)

IV. COLLEGE OF ENGINEERING

A. Undergraduate Course Changes:

AgE 433 Design Criteria for Plant and Animal Environment, 2 cr (2 and 0)  
(Change in credit hours only.)

AgE 465 Engineering Properties of Biological Materials, 2 cr (1 and 3)  
(Change in credit hours only.)

ME 402 Innovative Design III, 3 cr (2 and 3)  
(Change in credit hours only.)

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, DEC. 3, 1973 (Continued)6. New Graduate Courses:

- BioE 880 Applied Health Engineering Lab, 1 cr (0 and 3)  
 ESE 802 Principles of Water Treatment Systems, 4 cr (4 and 0)  
 (Replaces ESE 843)  
 ESE 803 Lab. in Principles of Water Treatment, 1 cr (0 and 3)  
 (Replaces ESE 833)  
 ESE 804 Design & Operation of Water Treatment Systems, 4 cr (4 and 0)  
 (Replaces ESE 842)  
 ESE 805 Lab. in Design & Operation of Water Treatment Sys., 1 cr (0 and 3)  
 (Replaces ESE 832)  
 ESE 806 Integrated Problems in Water Treatment Systems, 2 cr (2 and 0)  
 (Replaces ESE 852)

7. Graduate Course Changes:

- AgE 633 Design Criteria for Plant & Animal Environment, 2 cr (2 and 0)  
 (Credit change)  
 AgE 665 Engineering Properties of Biological Materials, 2 cr (1 and 3)  
 (Credit change)  
 BioE 850 Special Topics in Biomedical Engineering, 1-4 cr (0-4 and 12-0)  
 (Credit change)  
 E&CE 890 Selected Topics in Electrical Engineering, 1-3 cr (1-3 and 0)  
 (Credit change)  
 ESE 883 Selected Topics in Environmental Engineering, 1-4 cr  
 (Credit change)  
 ESE 884 Selected Topics in Environmental Engineering, 1-4 cr  
 (Credit change)  
 ME 602 Innovative Design III, 3 cr (2 and 3)  
 (Replaces ME 484 and makes credit change.)

## V. COLLEGE OF LIBERAL ARTS

A. New Undergraduate Course:

- Engl 414 Medieval Drama, 3 cr (3 and 0)

B. New Graduate Course:

- Engl 614 Medieval Drama, 3 cr (3 and 0)

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, DEC. 3, 1973 (Continued)

VI. COLLEGE OF PHYSICAL, MATHEMATICAL, AND BIOLOGICAL SCIENCES

A. New Undergraduate Courses:

- CpSc 440 List Processing, 3 cr (3 and 0)
- CpSc 460 Peripherals and File Design, 3 cr (3 and 0)
- CpSc 462 Design of Data Management Systems, 3 cr (3 and 0)
- Phys 457 Basic Health and Radiological Physics I, 3 cr (3 and 0)
- Phys 458 Basic Health and Radiological Physics II, 3 cr (3 and 0)
- Zool 480 Developmental Biology, 4 cr (3 and 3)  
(Replaces Zool 307.)

B. Undergraduate Course Changes:

- Bot 413 Phycology, 3 cr (2 and 3)  
(Number change only; replaces Bot 457, H457.)
- Bot 421 Plant Physiology, 4 cr (3 and 3)  
(Number change only; replaces Bot 352, H352.)
- Bot 441 Plant Ecology, 3 cr (2 and 3)  
(Number change only; replaces Bot 459, H459.)
- Bot 451 Plant Anatomy, 3 cr (2 and 3)  
(Number change only; replaces Bot 406.)
- Math 208, H208 Engineering Mathematics I, 4 cr (4 and 0)  
(To equate lecture hours and credits.)
- Micro 415, H415 Microbial Genetics, 4 cr (3 and 3)  
(Add prerequisite: Ch 224, Gen 302, Micro 305 or consent of the department.)

C. New Graduate Courses:

- CpSc 640 List Processing, 3 cr (3 and 0)
- CpSc 660 Peripherals and File Design, 3 cr (3 and 0)
- CpSc 662 Design of Data Management Systems, 3 cr (3 and 0)
- Phys 657 Basic Health and Radiological Physics I, 3 cr (3 and 0)
- Phys 658 Basic Health and Radiological Physics II, 3 cr (3 and 0)
- Zool 680 Developmental Biology, 4 cr (3 and 3)

D. Graduate Course Changes:

- Bot 613 Phycology, 3 cr (2 and 3)  
(Number change; delete Bot 657.)
- Bot 621 Plant Physiology, 4 cr (3 and 3)  
(Number change; delete Bot 652.)
- Bot 641 Plant Ecology, 3 cr (2 and 3)  
(Number change; delete Bot 659.)



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, DEC. 3, 1973 (Continued)D. Graduate Course Changes (continued):

- Bot 651 Plant Anatomy, 3 cr (2 and 3)  
(Number and description change; delete Bot 606.)
- Micro 615 Microbial Genetics, 4 cr (3 and 3)  
(Add prerequisites: Ch 224, Gen 302, Micro 305 or consent of the department.)
- Zool 812 Seminar, 1 cr (1 and 0)  
(Students may enroll in two sections of this course during a given semester.)

E. Revised Curriculum

## MEDICAL TECHNOLOGY CURRICULUM

FRESHMAN YEAR

## First Semester

CH 101 General Chemistry....	4 (3,3)
ENGL 101 English Comp.....	3 (3,0)
MATH 101 Math Analysis I <u>or</u>	3 (3,0)
MATH 106 Calculus of One Variable.....	4 (4,0)
ZOOL 101 Animal Biology.....	3 (3,0)
ZOOL 103 Animal Biol. Lab...	1 (0,2)
MED TECH 101 Intro. to Med Technology.....	1 (1,0)
Elective.....	1

16 or 17

## Second Semester

CH 112 General Chemistry.....	4 (3,3)
ENGL 102 English Comp.....	3 (3,0)
MATH 102 Math Analysis II <u>or</u>	3 (3,0)
MATH 108 Calculus and Linear Algebra.....	4 (4,0)
HISTORY Elective.....	3 (3,0)
Elective.....	1
Modern Language.....	4 (3,1)

18 or 19

SOPHOMORE YEAR

CH 223 Organic Chemistry....	3 (3,0)	CH 224 Organic Chemistry.....	3 (3,0)
CH 227 Organic Chem. Lab....	1 (0,3)	CH 228 Organic Chem. Lab.....	1 (0,3)
Modern Language.....	4 (3,1)	ECON 201 Prin. of Economics..	3 (3,0)
History elective.....	3 (3,0)	MICRO 305 Gen. Microbiology..	4 (3,3)
PHYS 207 Gen. Physics.....	4 (3,2)	PHYS 208 Gen. Physics.....	4 (3,2)
Elective.....	3	Elective.....	3
	18		18

JUNIOR YEAR

CH 313 Quant. Analysis.....	3 (3,0)	GEN 302 Genetics.....	4 (3,3)
CH 317 Quant. Anal. Lab.....	1 (0,3)	PHYCH 201 Gen. Psychology....	3 (3,0)
° Literature Requirement....	3 (3,0)	° Literature Requirement....	3 (3,0)
ECON 202 Prin. of Economics.	3 (3,0)	* Elective.....	6
#Biological Science Elective.....	4		
Elective.....	2		
	16		16

# To be approved by advisor.

° To be selected from Eng. 203, 204, 205, 206, 207, 208.

\* Electives to be selected from 300 or 400 level courses in biological sciences, chemistry, education or management areas or with approval of advisor.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, DEC. 3, 1973 (Continued)F. Curriculum Option

## MICROBIOLOGY CURRICULUM -- MOLECULAR BIOLOGY OPTION

FRESHMAN YEAR

The freshman year curriculum will be the same as for the general microbiology curriculum.

SOPHOMORE YEAR

CH 223 Organic Chemistry	3 (3,0)	Bioch 301 Molecular Biology	3 (3,0)
CH 227 Organic Chemistry Lab	1 (0,3)	CH 224 Organic Chemistry	3 (3,0)
Literature Requirement*	3 (3,0)	CH 228 Organic Chemistry Lab	1 (0,3)
Micro 305 General Microbiology	4 (3,3)	Literature Requirement*	3 (3,0)
Math 108 Cal. and Lin. Algebra	4 (4,0)	Gen 302 Genetics	4 (3,3)
Social Science Elective	<u>3 (3,0)</u>	Microbiology Elective <sup>#</sup>	<u>3</u>
	18		17

JUNIOR YEAR

Engl 301 Public Speaking	3 (3,0)	Micro 411 Pathogenic Bact.	4 (3,3)
Micro 401 Adv. Bacteriology	4 (2,6)	Micro 412 Bacterial Physiology	4 (3,3)
Physics Elective <sup>+</sup>	4-3	Physics Elective <sup>+</sup>	4
Micro 414 Basic Immunology	3 (2,3)	CH 330 Intro. Phy. Chem.	3 (3,0)
Elective	<u>4-5</u>	or	
	18	Phys 417 Intro. Biophysics	3 (3,0)
		Elective	<u>3</u>
			18

SENIOR YEAR

Micro 415 Micro Genetics	4 (3,3)	Micro 491 Spec. Problems	2 (0,6)
Micro 416 Intro. Virology	3 (3,0)	Bioch 424 Prin. Biochemistry	3 (3,0)
Bioch 423 Prin. Biochemistry	3 (3,0)	Social Science Elective	3 (3,0)
Social Science Elective	3 (3,0)	Elective <sup>§</sup>	<u>7</u>
Elective	<u>3</u>		15
	16		

\* To be selected from the following: Engl 203, 204, 205, 206, 207, 208

+ To be selected from the following course sequences: Either Phys. 207 and 208, or Phys. 1 and 221, 223

# To be selected from the following courses: Bot 451, 457; Micro 400, 402, 404, 410, 413; Pl Pa 456; PS 458; Zool 403, 456.

§ Should include one of the following courses: Ex. St. 301; Comp Sc. 205; CH 313 and 317.

Recommended electives in addition to those listed above are: BioE 401; Bioch 425, 426; CH 428; Math 206; Phys 471, 473; Zool 460.

This option provides 17 semester hours of open approved electives. Military science or aerospace studies may be elected if desired.

Action: Approved.

*E. N. Tyndall*  
E. N. Tyndall  
Secretary

MINUTES OF THE MEETING OF THE FACULTY SENATE, NOV. 13, 1973

President Fulton called the meeting to order at 4:15 p.m. He noted that he had distributed to all the Senators revised and complete copies of minutes for all of the meetings since April. For the October minutes, Pres. Fulton suggested some changes in wording on the first two pages. Prof. Holt moved the adoption of the minutes incorporating these changes. The motion passed, the minutes were approved as changed.

President's Report

Pres. Fulton reported that the Undergraduate Council at its meeting on Oct. 12 had considered the Senate's RESOLUTION ON OPTIONAL FINAL EXAMINATIONS (FS-73-6-1). Both Pres. Fulton and Prof. Steirer, whose Senate Committee had introduced the Resolution, had spoken in behalf of it. However, the Council had rejected the Resolution by a vote of 8 to 3, with 2 abstentions. Pres. Fulton pointed out that the Student Senate on Oct. 29 had passed a resolution requesting that final exams be optional if the faculty of individual departments wished to make them so on a course-by-course basis.

At the Planning Council's meeting on Oct. 16, Pres. Fulton reported, the University Master Planner, Prof. Eflin, had presented the plans for land use and vehicular flow which he had previously presented to the Senate on Aug. 21. The Council had also approved a resolution calling for a secretary to take minutes of its meetings and for the Council to submit approved minutes for publication in the Newsletter.

Pres. Fulton reported that at a special meeting of the AFSC on Oct. 23, Adm. McDevitt, Vice President for Executive Affairs, had discussed the Class Attendance Policy. Adm. McDevitt stated that, in view of the fact that this policy is primarily of concern to faculty and students, he felt it would be inappropriate for him to provide a written interpretation of it, since, in effect, that might mean creating a new policy. He then suggested that, if there is dissatisfaction with the policy as it is now stated, a revision by the faculty and the students should be recommended to the Administration. The AFSC examined attendance regulations in effect at several other universities and asked the Faculty and Student Senates to reconsider Clemson's policy.

At a meeting with Dean Hurst on Oct. 24, Pres. Fulton had discussed the Senate's RESOLUTION ON DUPLICATION OF COURSES AND PROGRAMS (FS-73-10-1). Dean Hurst pointed out that no criteria for determining if there is duplication now exist. However, he suggested that members of the college committees now reviewing their graduate programs could provide the Senate with information on problems which arise or any criteria developed. Dean Hurst also noted that, although only a few University programs are now being studied in response to a request from the Commission on Higher Education and Pres. Edwards' memorandum, "Review of Academic Programs," it is likely that, within the next two years, all graduate and undergraduate programs at the University will be reviewed.



MINUTES OF THE MEETING OF THE FACULTY SENATE, NOV. 13, 1973 (Continued)

Dean Hurst also discussed with Pres. Fulton the purchase of equipment by the University. Concern had been expressed in the Senate over the fact that it seemed impossible to deviate from proposed budgets if unanticipated equipment needs arose. Dean Hurst said that this concern resulted from a misunderstanding which arose from the fact that some Revenue Sharing Funds were being used. It had been thought that flexibility in the use of these funds was impossible. However, such is not the case. Funds allotted in the 1973-1974 operating budget for equipment purchases to each college may be used as the college dean deems necessary subject to normal procedures and to the restriction that equipment funds cannot be used for capital improvements. With respect to equipment and next year's budget Dean Hurst stated that there is plenty of time to amend lists of equipment in the 1974-75 budget before it is finalized. In response to a question from Prof. Bauld, Pres. Fulton pointed out that lapsed salary funds cannot be used for equipment purchases but will revert to the State if not used for a replacement's salary.

Regarding the State Government Weekend, Oct. 25-27, Pres. Fulton noted that Clemson University, the Textile Manufacturers Association, and the Textile Hall Corporation were hosts to the state constitutional officers, including the governor and his staff, state legislators, U. S. Congressmen from South Carolina and their wives. Most of the expenses for the weekend were borne by the Textile Manufacturers Association and the Textile Hall Corporation. Pres. Fulton complimented a film, "Clemson University Today," narrated by Prof. Charles W. Dunn, which had been shown to those people attending the weekend meeting.

At the meeting of the Educational Council on Nov. 5, Pres. Fulton reported, it was noted that the Commission on Higher Education had recommended approval of 100 percent of the University's proposed budget for the coming fiscal year, with the exception that it recommended that certain equipment items be purchased over a three-year period. The Council also approved a Bachelor of Arts and Bachelor of Science in Pre-Professional Studies for Clemson students completing three years at Clemson and entering a professional degree program elsewhere, provided that certain stipulated conditions are met. The awarding of such degrees is to be retroactive, subject to request by the individual former students and approval by the particular college concerned.

At the AFSC meeting on Nov. 6, Pres. Fulton reported, both optional final exams and the Class Attendance Policy were discussed, but no action was taken.

Pres. Fulton said that he had met again with Dean Hurst on Nov. 9. Efforts being made by the University to deal with the energy crisis were discussed. (Copies of a statement by Pres. Edwards concerning the crisis, a memorandum from Chief Highway Commissioner S. N. Pearman concerning petroleum fuel allocations, and Pres. Edwards' memorandum of Oct. 2 on fuel and energy conservation were distributed to the Senators.) Dean Hurst had also reported that effective Dec. 13, Dr. Jarrett C. Hester would become Associate Dean of Engineering. A committee will be appointed to search for a new Head of Mechanical Engineering.



MINUTES OF THE MEETING OF THE FACULTY SENATE, NOV. 13, 1973 (Continued)

Pres. Fulton reported that at the meeting of the Undergraduate Council on Nov. 2 the Council approved the substitution of the grade "W" for the present "WP" or "WF" for a student withdrawing from a course prior to the last five weeks of the course. After that time only semester grades will be recorded. The new policy is still subject to approval by the Administration. A Faculty Senate Resolution of June 13, 1972, had recommended such an amendment to the University Announcements.

Pres. Fulton noted the passing of Mrs. Virginia McClure, wife of Dean McClure on Nov. 2.

Prof. Cross, Senate representative on the Traffic Committee, reported that at its recent meeting a revised plan for faculty parking had been discussed. The problem of enforcing parking regulations had also been given serious consideration.

Pres. Fulton also noted that Alpha Phi Omega's shuttlebus service between dormitories and parking lots on weekends seems to be successful. Finally, he called attention to some printed comments from Higher Education and National Affairs on the matter of tenure at CUNY which he had passed out to the Senators.

Committee Reports

For the Admissions and Scholarship Committee, its chairman, Prof. Steirer, expressed regret that the Undergraduate Council had failed to approve the Faculty Senate Resolution on Optional Final Examinations. His committee members, he said, had decided to ignore efforts to permit colleges and departments to use their discretion in the matter. Such decisions, he pointed out, would have to be made each semester before classes begin, and this did not seem practical to the Committee.

On the matter of the Class Attendance Policy, Prof. Steirer said that his committee members had discussed the possibility of ambiguity in the present policy. However, they decided unanimously that they liked the present policy. Noting that Adm. McDevitt has pointed out that faculty members do not have the right to penalize students for failing to attend class by lowering their grades, Prof. Steirer noted that the policy still has enough "teeth" in it, since students missing classes must (1) get an excuse if the absence is legal and (2) arrange to make up work missed within one week of the absence at the convenience of the instructor, if the absence is excused. He stated that deficiencies in course work resulting from absences can certainly be used as a basis for lowering a student's grade if the student does not arrange with the instructor to remove the deficiencies. Prof. Bauld pointed out that the Redfern Health Center has been telling students to request their instructors to call and determine if the student's excuse is legitimate. Prof. Steirer responded that, according to the University policy as printed in the Student Handbook, Redfern is required to provide written excuses. It was suggested that faculty members insist that students bring written excuses.

MINUTES OF THE MEETING OF THE FACULTY SENATE, NOV. 13, 1973 (Continued)

Finally, Prof. Steirer noted that his committee had discussed the possibility that faculty members may not have input into the development of new curricula. He requested that specific information regarding such a possibility be reported to his committee.

For the Policy Committee, the chairman, Prof. Skelton, reported that consideration had been given to complaints that the Physical Plant may have overcharged for services rendered. However, he said, none of the complaints has been substantiated. Thus, it was not possible for the committee to evaluate the complaints. On the matter of orientation for incoming faculty, Prof. Skelton said his committee members had agreed it was useful and should be continued. The time it was held, he said, was "terrible," but the committee members could not suggest a better time. He urged that arrangements be made for registering the cars of new faculty and taking their ID photos during orientation but made no other recommendations.

Regarding the recent request to provide information on religious preferences, Prof. Skelton said that he had discussed the matter with Col. E. N. Tyndall and Mr. Ray Thompson. They had pointed out that the request resulted from Executive Order 11246, as amended. According to this order, when promotions or transfers are being considered, the employer must review employment records to assure that no discrimination against members of minority religious or ethnic groups occurs. In order to comply with this stipulation, the University must know the religious preference of each of its employees. Because reports must be made frequently, the information is stored in the computer. However, every effort is being made to control access to this information; a person having both the tapes on which the data are stored and access to a computer, Prof. Skelton said, would still not be able to retrieve the information without first breaking a code.

Prof. Skelton said that the Senate will be reapportioned next February on the basis of information provided by Dean Hurst. Finally, on the matter of University contracts with vendors, Prof. Skelton said that his Committee felt that the Senate's position had been adequately presented in the Senate Resolution of March 1972 and need only be restated.

For the Research Committee, its chairman, Prof. Bauld, expressed concern over the planning for the Continuing Education Center. Arguing that it was a matter beyond the scope of his committee, he introduced a RESOLUTION ON THE CONTINUING EDUCATION CENTER (FS-73-11-1):

BE IT RESOLVED that the President of the Faculty Senate appoint an Ad Hoc Committee to monitor the plans and decisions originating from the various College and University Committees that have been appointed to make in-depth studies for the administration on the needs of a Continuing Education Center.

MINUTES OF THE MEETING OF THE FACULTY SENATE, NOV. 13, 1973 (Continued)

The Resolution passed unanimously.

Prof. Bauld said that his Committee will presently introduce a resolution to replace the present Faculty Research Committee with a Faculty Research Council. His Committee, he said, is continuing its study of indirect costs and of the problems that budgeting procedures may have on graduate research.

For the Welfare Committee Prof. Cross referred to statements on University-owned housing which had been distributed to the Senators. There is some concern over the fact that sometimes insufficient University-owned housing is available to satisfy the needs of incoming faculty and staff. However, no resolution on the matter had been drafted by the Committee. Prof. Cross noted that Prof. O'Dell's subcommittee is still studying tax-sheltered annuities and promises a report in the near future. Prof. Cross also noted that the Committee had met with Prof. McLean regarding retirement policies. Finally, he referred to data on faculty salaries which had been distributed to the Senators showing maximum, minimum, median, and average salaries by college. It was noted that the survey does not separate the salary information by the degrees held by faculty members. Pres. Fulton pointed out that Dean Hurst had complied fully with the Senate's Resolution on Annual Salary Information in preparing the survey and that if such information were made available, there would probably be more occupancy classes with fewer than five members. Thus, less information might be available for the Senate regarding faculty salaries.

Old Business

Prof. O'Dell inquired about the status of the Resolution on Annual Leave (Vacation). Pres. Fulton stated that the matter was in the hands of Pres. Edwards.

New Business

Prof. Holt inquired whether or not it would be possible to have rotating or elected department chairmen at the University instead of department heads appointed by college deans. Pres. Fulton referred the matter to the Policy Committee.

There being no further committee reports or additional business, the meeting adjourned at 6:09 p.m.

Russell D. Shannon  
Secretary

Members absent: W. Baron, W. F. Beckwith, C. R. Dillon, D. O. Ezell, O. J. Jacobus, W. E. Johnston.



MINUTES OF THE UNDERGRADUATE COUNCIL, NOVEMBER 2, 1973

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Ralph W. Gilchrist, Aileen S. Prevost, Jerome V. Reel, Malcolm J. Skove, Rodney M. Sprott (Student Representative), David L. Rowe (Student Representative), Edward A. Vaughn, Kenneth N. Vickery, and Spurgeon Cole (Visitor).

The minutes of the October 5, 1973 and October 12, 1973 meetings were approved as distributed.

Dean Green introduced Dr. Spurgeon N. Cole, Chairman of the Committee on the Improvement of Undergraduate Teaching, standing committee of the Council. Members appointed to this committee are D. W. Bradbury, T. E. Skelton, Carolyn Briscoe, Arline Duvall, Edward A. Vaughn, Joe F. Allen, E. H. Law, Corinne H. Sawyer, David L. Rowe (Student Representative), and Rodney M. Sprott (Student Representative). The committee was asked to take another look at the "Clemson University Teacher Evaluation Questionnaire" and to consider ways of making the evaluation more effective. The Questionnaire is to be given during the week following Thanksgiving.

A recommendation that a grade of "W" replace the present "WP" and "WF" was presented by Dean Vickery, Chairman of the Committee to Study the Clemson University Grading System for Undergraduates. The recommendation was approved. The following statement, upon receiving final approval, will replace the description of the WP and WF grades on pages 102-103 of the 1973-74 Clemson University Announcements and all other sections not consonant with this statement:

W-Withdrew. This grade indicates that the student withdrew from the course. No credit hours taken are recorded for the grade of W provided that the course is dropped prior to the last five weeks of classes in the semester. A student enrolled the last five weeks of classes shall have final grades recorded.

The statement, "Withdrawal from the University" on page 106 of the 1973-74 University Announcements will be amended to read as follows:

"Withdrawal from the University. A student may withdraw from the University any time before the last five weeks of classes in the semester without having grades recorded. A student enrolled the last five weeks of classes shall have final semester grades recorded.

After the first withdrawal from college the student is eligible to continue his enrollment the following semester, provided he meets other applicable



MINUTES OF THE UNDERGRADUATE COUNCIL, NOV. 2, 1973 (Continued)

regulations. For each succeeding withdrawal, however, the student shall be ineligible to continue his enrollment the following semester unless there are extenuating circumstances approved by the Committee on Admissions and Continuing Enrollment."

Another standing committee of the Council, the Committee on Admissions and Continuing Enrollment, will be chaired by Dean Kenneth N. Vickery. Appointed to serve on this committee are D. Y. Brannock, Jr., Bingham M. Cool, Luther W. Baxter, Lamar H. Brown, Eugene Park, Aileen Prevost, R. C. Harshman, E. A. Vaughn, W. W. Pennscott, R. J. Berry, Rodney M. Sprott (Student Representative), and David L. Rowe (Student Representative).

Dean Kenneth N. Vickery will serve as chairman of the Sub-committee on Awarding a Second Baccalaureate Degree. Other committee members are Harry E. Stewart, Jerome V. Reel, Lamar H. Brown, and Ralph W. Gilchrist.

College of Agricultural Sciences

The following course was approved:

Fd Sc 425 Nutrition and Dietetics, 3 cr (3 and 0).

College of Physical, Mathematical, and Biological Sciences

The following course was approved:

Math 208 Engineering Mathematics I, 4 cr (4 and 0).

H208

The Medical Technology Curriculum was approved.

See Minutes of Educational Council meeting for Dec. 3, 1973, this issue of the Newsletter for this curriculum.

OFFICE OF THE DEAN OF THE UNIVERSITY

At the December 9-12, 1973 meeting in Houston, Texas, of the Southern Association of Colleges and Schools (SACS), Dr. Victor Hurst, Vice President for Academic Affairs and Dean of the University, was elected Secretary-Treasurer of the Conference of Academic Deans of the Southern States. The Conference of Academic Deans of the Southern States is an affiliated group of SACS.

GRADUATE COUNCIL MINUTES, NOVEMBER 9, 1973

The meeting of the Graduate Council was called to order by Dean Schwartz. Those present were: Dr. Gahan, Dr. Mandel, Dr. Camper, Dr. Matthews (alternate for Dr. Freeze), Professor Means, Dr. Gauthreaux, Dr. Dysart, Mr. Preston Brown, and Mr. James Kelley.

The minutes of the October 12, 1973 meeting were approved as distributed.

The following courses and changes were approved:

In Ed	635	- Advanced Industrial Metalworking Practices
In Ed	640	- Advanced Techniques of the Graphic Arts
Ag E	633	- Design Criteria for Plant and Animal Environment (credit change)
Ag E	665	- Engineering Properties of Biological Materials (credit change)
BioE	850	- Special Topics in Biomedical Engineering (credit change)
ESE	802	- Principles of Water Treatment Systems (Repl. ESE 843)
ESE	803	- Laboratory in Principles of Water Treatment (Repl. ESE 833)
ESE	804	- Design and Operation of Water Treatment Systems (Repl. ESE 842)
ESE	805	- Laboratory in Design and Operation of Water Treatment Systems (Repl. ESE 832)
ESE	806	- Integrated Problems in Water Treatment Systems (Repl. ESE 852)
ME	602	- Innovative Design III
Engl	614	- Medieval Drama
Bot	613	- Phycology (Repl. Bot 657)
Bot	621	- Plant Physiology (Repl. Bot 652)
Bot	641	- Plant Ecology (Repl. Bot 659)
Bot	651	- Plant Anatomy (Repl. Bot 606)
Cp Sc	640	- List Processing
Cp Sc	660	- Peripherals and File Design
Cp Sc	662	- Design of Data Management Systems
Micro	615	- Microbial Genetics
Phys	657	- Basic Health and Radiological Physics I
Phys	658	- Basic Health and Radiological Physics II
Zool	812	- Seminar (change in existing course)

Dean Schwartz administratively approved:

CRP 865 - Planning Studio IV (change of credits)

The following course was referred to the College of Engineering for a recommended change and Dean Schwartz was authorized to approve administratively upon resubmission:

BioE 880 - Applied Health Engineering

GRADUATE COUNCIL MINUTES, NOVEMBER 9, 1973 (Continued)

The following course was tabled:

Ch E 654 - Physiological Control Systems

Dr. Gauthreaux requested that Zoology 680, Developmental Biology, be added to the agenda of new courses for approval. Information of official approval at the undergraduate level was not available. A motion was made, seconded, and approved that Dean Schwartz be authorized to administratively approve this new course after it has been officially approved at the undergraduate level.

Dean Schwartz requested that colleges who had not turned in names of faculty to serve on the graduate program evaluation committees please do so.

Dr. Dysart presented a progress report on the proposed Doctor of Education program.

Dean Schwartz gave a report regarding the University parking survey.

The University policy regarding examinations was discussed as related to graduate students, and the Council expressed interest in discussing further at a future meeting.

Dr. H. G. Spencer, Head of the Department of Chemistry, requested that a subcommittee from the Graduate Council be appointed to meet with the geology faculty regarding a proposed Master of Science degree in Geology. The following committee was appointed:

Dr. Gahan, chairman  
Dr. Gauthreaux  
Dr. Dysart  
Mr. James Kelley

A motion was made, seconded and passed to adjourn.

COLLEGE OF EDUCATION

H. F. Landrith (Dean) conducted a symposium on Improving Instruction in Columbia on Dec. 1. Elizabeth Galloway (Asst Prof) and Chester R. Freeze (Prof) served as consultants at the symposium.

FACULTY RESEARCH COMMITTEE AWARDS

The following Faculty Research Committee grants were awarded during the November 28, 1973 Committee meeting.

E. D. Brodie (Zoology)	"Defensive Behavior of Salamanders"	\$ 800
R. Willingham (Languages)	"Black Voices from the Antilles"	\$ 1,423
L. E. Seamon (Languages)	"Recent Spanish Drama as a Reflection of Cultural Changes in Spain"	\$ 915
J. L. Arbena (History)	"Colombia and the Panama Problem at the Rio Conference, 1906"	\$ 675
P. W. Wannamaker (Languages)	"Content Analysis of Materials Used in the Teaching of English in the German Gymnasium: Emergence of an American Image"	\$ 420
G. L. Powell (Biochemistry)	"Determination of <u>In Vivo</u> Concentrations of Acyl-CoA"	\$ 1,025
T. Carpenter (Education)	"Improving Comprehension and Rate Gains Through Hardware and Software at the College Level"	\$ 675
J. C. Acton (Food Science)	"Rheological Properties of Meat Emulsions"	\$ 900
G. M. Haselton (Geology)	"Geologic History and Mammalian Life in the Tarr Inlet Region, Glacier Bay National Monument, Alaska"	\$ 1,782
L. I. Park (Psychology)	"Gonadectomy and TACE: Effects on Conditioned Suppression in Rats"	\$ 850



FACULTY RESEARCH COMMITTEE AWARDS (Continued)

A. M. Weinstein (DIS-E)	"Clinical Gait Analysis"	\$ 800
M. R. Pilo (Political Sci)	"A Socio-Political and Demographic Analysis of South Carolina's Jewish Community"	\$ 600
M.J.R. Martz (Political Sci)	"The Concept of Recognition of New Governments: A Case Study of Venezuela"	\$ 415
R. G. Bursey (Food Science)	"Measurement of Serum Vitamin B <sub>12</sub> Levels in Humans Using a Radioisotope Assay"	\$ 700
C.F. & E.G. Brainerd (Psychology)	"The Effect of Student Physical Appearance on Student-Teacher Interaction in the Pre-School Setting"	\$ 760
L. Berger (Psychology)	"Individualizing Instruction for Low Achievers"	\$ 450
D. R. Helms (Zoology)	"Nuclear Ribosomes - A Study of Their Structure, Metabolism, and Role in Nuclear Protein Synthesis"	\$ 800
P. Hamel G. E. Howard (RPA)	"Location of Historical Materials Relating to Recreation in Colonial South Carolina 1540-1776"	\$ 975
L. A. Dyck (Botany)	"Cell Walls of Spores: Physio- logical, Developmental, and Phylogenetic Studies on the Charophytic Algae"	\$ 700
R. M. Frye (RPA)	"Review of Realism Drama Covering the Role of South Carolina in the American Revolution"	\$ 150

Clemson University Library

COMMITTEE APPOINTED TO ADVISE IN THE SELECTION OF AN ASSISTANT DEAN  
OF GRADUATE STUDIES

The administration has authorized, effective July 1, 1974, the creation of a new position entitled "Assistant Dean of Graduate Studies." In accordance with procedures outlined in the Manual for Faculty Members, Dr. Victor Hurst, Dean of the University, has appointed the following persons to serve on a committee which will advise in the selection of a person to fill this position:

Dr. N. Dwight Camper, Department of Plant Pathology and Physiology  
Professor George C. Means, Jr., Department of Architecture  
Dr. Chester R. Freeze, Department of Elementary and Secondary Education  
Dr. Benjamin C. Dysart, Department of Environmental Systems Engineering  
Dr. Lawrence W. Gahan, Department of Recreation and Park Administration  
Dr. Hugh H. Macaulay, Department of Economics  
Dr. Jerome H. Mandel, Department of English  
Dr. Arline M. Duvall, Baccalaureate Degree Program in Nursing  
Dr. Sidney A. Gauthreaux, Department of Zoology  
Mr. David Glocker, Clemson University Graduate Student Association

At their first meeting on December 7, 1973, the committee elected Dr. N. Dwight Camper to serve as Chairman.

AGRONOMY

M. W. Jutras (Assoc Prof) attended the national meetings of the American Society of Agronomy in Las Vegas, Nev., Nov. 11-15, and presented a paper co-authored by B. J. Skelton (Assoc Prof, Hort) entitled, "Problems with the Implementation and Management of a Self-Instructional Classroom," and co-authored a paper with Lloyd H. Blanton (Asst Prof, Ag Ed) which was presented by Donald C. Lovette entitled, "Variables Influencing Attitudes and Performance in a Self-Instructional Classroom."

K. S. LaFleur (Assoc Prof) has published the following articles:

"Fluometuron-soil-solvent interactions" in the Soil Science, 1973, 116, 376-382. Fluometuron is better known as Cotoran, a widely-used cotton herbicide.

With G. A. Wajeck and W. R. McCaskill, "Movement of toxaphene and fluometuron through Dunbar soil to underlying groundwater" in the Journal of Environmental Quality 1973, 2, 515-518. Toxaphene is a widely-used cotton insecticide. The experiment site was the Pee Dee Experiment Station, Florence.

BIOCHEMISTRY

J. M. Shively (Prof and Hd) presented an invited seminar entitled "Carboxysomes: Functional organelles in procaryotic cells" to the faculty and graduate students at the University of Georgia on Nov. 29.

J. M. Shively is an author of an article entitled "Electron Microscopy of the Carboxysomes (Polyhedral Bodies) of Thiobacillus neapolitanus" which appeared in the Journal of Bacteriology, Vol. 116, No. 3, pp. 1405-1411.

BOTANY

Stephen G. Gibson (Undergrad Stu) and J. E. Fairey (Asst Prof) published the following in Castanea 38:207, 1973: "Another Report of Buxbaumia minakatae Okam. in North America."

C. J. Umphlett (Prof and Hd) was an invited participant in a symposium, "Insect Mycoses" at the annual meeting of the Eastern Branch of the Entomological Society of America in New York City on Oct. 31 - Nov. 2. His presentation was entitled, "Lagenidium as a Control Agent for Mosquitoes."

CHEMISTRY

A. R. Pinder (Prof) presented a seminar, "Mass Spectrometry in Organic Chemistry," to the Chemistry Dept. of Armstrong State College, Savannah, Ga., Nov. 30.

Recent publication - J. F. Allen (Assoc Prof) and B. R. Edwards, "A Comparison of two Prussian Blue Models Tracer and Fe-56 Labeled Mossbauer Studies," J. Inorg. Chem. 35, 3547 (1973).

COLLEGE OF ARCHITECTURE

Jan. 10-28, Lee Hall Gallery. An interpretive photographic study of the way Alvar Aalto has handled light, shadow reflection, and texture in the library at Mount Angel Abbey in Oregon. It is also a study of spatial perception of architecture through photography, and is a result of recent research involving perceptual distortion of depth in viewing architectural photographs. Organized by Fuller Moore, Asst. Prof. of Architecture, University of Oregon.

## CHEMICAL ENGINEERING

Duane F. Bruley (Prof) presented "Oxygen Sensor Function in Cerebral Autoregulation" at the 66th annual AIChE meeting in Philadelphia, Nov. 13.

Duane F. Bruley presented "Oxygen Transport in the Microcirculation" to a seminar at the University of Arkansas Medical Center in Little Rock, Nov. 29.

Duane F. Bruley is joint editor with H. I. Bicher (Univ Ark) of the proceedings of the international symposium on oxygen transport to tissue held at Charleston/Clemson last spring. The proceedings have been published by Plenum Press as volumes 37A and 37B in the Advances in Experimental Medicine and Biology Series. Papers published in vol. 37B are "Mathematical Considerations for Oxygen Transport to Tissue," "Distributed Model Solution Techniques for Capillary-Tissue Systems," "Simulating Myocardium Oxygen Dynamics," and "Antiadhesive Drugs and Tissue Oxygenation."

## CIVIL ENGINEERING

Subhash C. Anand (Assoc Prof) has been elected as Secretary-Treasurer of the Northwest Branch of the South Carolina Section of the American Society of Civil Engineers for a one-year term.

Billy L. Edge (Assoc Prof) has received funding of a research contract with the American Enka Company in the amount of \$9,797.50. The project, "Demonstration of the Capability of Enkamat to Prevent Erosion and Scour: Part I" will begin Dec. 1.

## CONTINUING ENGINEERING EDUCATION

A short course on the layout and interpretation of a soils exploration program and its relationship to foundation design, sponsored by the Dept. of Civil Engineering, will be presented in three evening sessions Jan. 30, Feb. 2 and 9 at Greenville TEC by William Baron (Assoc Prof).

A seminar on textile wastewater treatment and air pollution control, sponsored by the College of Industrial Management and Textile Science will be held Jan. 23 at Hilton Head. Thomas M. Keinath (Assoc Prof, ESE), John J. Porter (Assoc Prof, Textiles), Craig A. Brandon (Assoc Prof, ME), F. C. Alley (Prof, Chem E), and Eric Snider (Grad Stu, Chem E) will moderate or present sessions.



ENGINEERING MECHANICS

E. Harry Law (Asst Prof) and Neil K. Cooperrider (Ariz State) are principal investigators on a \$53,866 contract from the United States Dept. of Transportation for the first year of a two year research investigation of freight car dynamics. The Research Center of the Association of American Railroads will provide an additional \$50,000 in personnel and facilities for the program during the two years.

ENVIRONMENTAL SYSTEMS ENGINEERING

Linvil G. Rich's (Prof) textbook Environmental Systems Engineering, published by McGraw Hill in Sept. was chosen as the featured selection of the Civil Engineers Book Club in Sept. and the Chemical Engineers Book Club in Dec.

John H. Austin (Prof and Hd) has been appointed to the Pickens County Water Commission by the Pickens County Council.

ELEMENTARY AND SECONDARY EDUCATION

Morris A. King (Prof and Hd) presented a paper entitled, "Evaluating Instructional Programs" in a discussion group at the annual meeting of the Commission of Secondary Schools, Southern Association of Colleges and Schools in Houston, Texas on Dec. 11.

Morris A. King was appointed a member on the Appeals Committee of the Commission of Secondary Schools, Southern Association of Colleges and Schools at the annual meeting in Houston on Dec. 9-12.

ENGLISH

John J. McLaughlin (Assoc Prof) presented a paper on "The Literature of Power: An Evaluation of Adlerian Criticism" at the annual convention of the Modern Language Association of America held in Chicago, Ill., Dec. 27-29.

Richard J. Calhoun (Alumni Prof) participated in the meeting of the executive committee of the Society for the Study of Southern Literature and with Robert W. Hill (Asst Prof) in the Conference of Editors of Learned Journals at the Modern Language Association convention in Chicago, Dec. 27-29.

Robert W. Hill is the author of an essay entitled, "James Dickey: Comic Poet," and a bibliography, "James Dickey: A Checklist," in James Dickey: The Expansive Imagination. A Collection of Critical Essays, ed. Richard J. Calhoun (Deland, Fla. Everett/Edwards, Inc. 1973).

## ENGLISH (Continued)

G. W. Koon (Asst Prof) published a review of W. P. Fox, Ruby Red in the current issue of The Georgia Review.

John L. Idol, Jr. (Assoc Prof) has published "A Note on William Marion Reedy and Kate Chopin" in the current issue of The Bulletin of the Missouri Historical Society.

## GEOLOGY

R. D. Hatcher (Assoc Prof) presented a seminar, "North America Paleozoic Foldbelts and Deformational Histories," at the University of Tennessee, Knoxville, Nov. 5.

Recent publication - R. D. Hatcher, "Basement versus Cover Rocks in the Blue Ridge of Northeast Georgia, Northwestern South Carolina and Adjacent North Carolina," Amer. Jour. of Science, 273, 671, (1973).

R. D. Hatcher has received approval by the Geological Society of America to organize a Penrose Conference on "The Brevard Zone."

## HORTICULTURE

M. LeRon Robbins served during 1973 as Contributing Editor for Research of Vegetable Crop Management Magazine. Dr. Robbins also is an Associate Editor of the journal Horticultural Research.

## INTERDISCIPLINARY STUDIES

B. W. Sauer (Asst Prof), A. M. Weinstein (Asst Prof), J. J. Klawitter (Asst Prof), and J. G. Bagwell (Grad Stu) will present "Porous Polyethylene: An Interfacial Material for Implanted Prostheses," Jan. 15 at the twentieth annual meeting of the Orthopaedic Research Society in Dallas, Texas.

## MATHEMATICAL SCIENCES

W. Robert Boland (Assoc Prof) has had the following article published: "Properties of product-type quadrature formulas," BIT, Vol. 13, (1973), p. 287.

J. V. Brawley (Prof), L. Carlitz (Duke Univ), and Theresa Vaughn (UNCG) have recently published the following article: "Linear Permutation Polynomials with Coefficients in a Subfield," Acta Arithmetica, Vol. 24, No. 2 (1973), p. 193

## MECHANICAL ENGINEERING

Eleven materials engineering design students and bioengineering students participated in an invited design project on consumer products to accommodate the handicapped sponsored by Armco Steel Corporation in Louisville, Ky., Jan. 4-10, along with industrial design students from the University of Michigan and Ohio State University. Douglas Bradbury (Alumni Prof) accompanied the students as they presented their designs before a panel of industrialists and educators.

## PHYSICS AND ASTRONOMY

P. B. Burt (Prof) had a paper published in Progress of Theoretical Physics, Vol. 50:3, September, 1973 entitled "Indirect Evidence for the Existence of Particles of Fractional Baryon Number."

## POLITICAL SCIENCE AND SOCIOLOGY

Walton H. Owens (Assoc Prof) has published "The Less They Have, The More They Want: A Reexamination of Concern With Status" in Psychological Reports, Vol. 33, 1973, pp. 828-830.

## POULTRY SCIENCE

A Research Note by B. L. Hughes (Asst Prof) was published in the most recent issue of Poultry Science. The article was entitled "Effect of Light Intensity on Fertility of Naturally-mated White Leghorns" and was in volume 52: 1968-1969.

H. J. Kohne (Grad Res Asst), M. A. Boone (Prof) and J. E. Jones (Assoc Prof) published "The Effect of Feed Consumption on the Survival Time of Adult Turkey Hens Under Conditions of Acute Thermal Stress" in the most recent issue of Poultry Science, volume 52: 1780-1783.

January 15, 1974

CALENDAR OF CAMPUS EVENTS

- 14-16 -- University Union Movie: "Emperor of the North," Holtzendorff YMCA, 6:50 and 9 p.m.
- 15 -- Speakers Bureau: Vice President Gerald Ford, Tillman Auditorium, 7 p.m.
- 15 -- Seminar: Dr. Charles H. Shultz, Slippery Rock State University, on "Volcanism in Antarctica," Room 235 Brackett Hall, 7 p.m.
- 16 -- Seminar: Dr. Charles H. Shultz on "Glaciation and Volcanism on Deception Island, Antarctica," Room 235 Brackett Hall, 8 a.m.
- 16 -- Seminar: Dr. Charles H. Shultz on "Petrology and Petrochemistry of Recent Eruptions of Deception Island, Antarctica," Room 235 Brackett Hall, 11:15 a.m.
- 17 -- The Future of the American Presidency Lecture Series, Part 7: Malcolm B. Parsons, professor of government at Florida State University, on "Elitists' Perceptions of Presidential Performance," Daniel Auditorium, 3:30 p.m.
- 17 -- Tip-Off Club Luncheon, Clemson House, 12 noon
- 18 -- CDA Concert: Seals and Croft, Littlejohn Coliseum, 8 p.m.
- 19 -- University Union Student Flea Market, Bowman Field, 10 a.m.
- 19 -- Graduate Record Examination, Graduate School Foreign Language Test
- 20 -- University Union Fine Arts Films: "Un Chien Andalou" and "Cabinet of Dr. Caligari," Holtzendorff YMCA, 8 p.m.
- 21 -- French Film, Daniel Auditorium, 7 p.m.
- 21 -- Short Course in Square Dancing, sponsored by University Union and Department of Recreation and Park Administration
- 21 -- University Union Billiards Tournament
- 21-23 -- University Union Movie: "Goodbye, Columbus," 7:10 and 9 p.m.
- 23 -- Basketball: Furman, here



January 15, 1974

CALENDAR OF CAMPUS EVENTS Continued

- 24 -- Clemson University Concert Series: Dallas Symphony Orchestra with duo-pianists Whittemore and Lowe, Littlejohn Coliseum, 8 p.m.
- 24-26 -- University Union Movie: "Midnight Cowboy," Holtzendorff YMCA
- 26 -- Basketball: Virginia, here
- 26 -- Admissions Test, Graduate Study in Business
- 27 -- University Union Free Sunday Flicks: "Gaslight Follies" and "Captain Marvel, Chapter 3," Holtzendorff YMCA, 8 p.m.
- 28 -- Square Dance Short Course
- 28 -- International Students Association: "Denmark Nite," Holtzendorff YMCA, 7 p.m.
- 28 -- Shakespeare Play: "Comedy of Errors," presented by the National Players, Tillman Auditorium, 8 p.m.
- 28-30 -- University Union Movie: "Ace Eli Rodgers of the Sky," Holtzendorff YMCA, 7:20 and 9 p.m.
- 29 -- University Union Bridge Tournament
- 29 -- French Play
- 30 -- Basketball: The Citadel, here
- 31 -- The Future of the American Presidency Lecture Series, Part 8: Robert Peabody professor at Johns Hopkins University, on "Congress and the Making of Presidential Candidates," Daniel Auditorium, 3:30 p.m.

### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM

Vol. 13

No. 11

February 1, 1974

JAN 28 1974

## Five Chosen To Receive 1974 Distinguished Alumni Awards

Five educators, a noted journalist, an insurance executive, and a U.S. Congressman -- all Clemson University graduates -- have been selected recipients of the institution's 1974 Distinguished Alumni Awards, the Clemson Alumni Association's highest honor.

The awards will be presented at the annual Alumni Banquet here on Saturday, June 8, a highlight of reunion weekend when members of 26 classes return to campus.

The recipients, chosen by the Alumni National Council from nominations made by alumni, are:

Ernest L. Senn (Class of 1939), professor and head of the Department of Horticulture at Clemson; Robert W. Moorman (1940) professor and head of the Department of Engineering Mechanics, Clemson; George Chaplin (1935), editor-in-chief of the Honolulu (Hawaii) Advertiser; Thomas C. (Buck) Breazeale (1942), Knoxville, Tenn., insurance executive; and U.S. Congressman Edward L. Young (1941) of Florence.

The five, whose selections are announced by Alumni Association President Lawrence Starkey of Atlanta, Ga., join 71 other alumni honored in previous years.

Senn has received international recognition for his contributions to horticulture, and has pioneered in innovative research that includes the use of seaweed as a plant growth regulator. He received the L.M. Ware Distinguished Teacher Award for the South and the U.S., and recently was named a Fellow of the American Society for Horticultural Science.

Moorman, who has 26 years teaching experience, received the 1970 Award for Outstanding Service to Engineering Education, Piedmont Chapter of the S.C. Society of Professional Engineers. He also was named Man of the Year by the Fort Hill Clemson Club in 1972, is a member of the American Society of Civil Engineers, member and past director of the S.C. Society of Engineers.

First editor of the Pacific Stars and Stripes in World War II, Chaplin was managing editor of the San Diego Journal and the New Orleans Item. His many tributes include the Overseas Press Club, Headliners, and John Hancock awards. He also is a Pulitzer Prize juror and a director of the Pacific and Asian Affairs Council.

Breazeale, who was president of the Clemson Alumni Association in 1971-72, is owner of Breazeale Insurance Agency, one of the most successful in Tennessee. A Thomas Green Clemson Associate and Alumni National Councilman for Southern States, he is active in a wide variety of civic work in Knoxville.

Cong. Young owns one of S.C.'s largest and most varied farm operations. He was elected to the U.S. House of Representatives for S.C.'s Sixth District in 1972. He served in the State House of Representatives from 1958-59; was named Man of the Year in Agriculture (1970) and Young Farmer of the Year in S.C. in 1955.

## "The Hobcaw Story" Wins Two National Cinema Awards

"The Hobcaw Story," a film produced by Clemson University about the history and ecology of Hobcaw Barony near Georgetown and the barony-based programs of Clemson's Belle W. Baruch Research Institute, has

won two prestigious national cinema awards.

It received the 1973 CINE Golden Eagle Award at the Council on International Non-theatrical Events' annual awards ceremony in Washington, D.C. The "Eagle" is awarded in recognition of films selected to represent the U.S. in international cinema competitions.

"The Hobcaw Story" also placed third in national competition in the annual Forestry Film Festival sponsored by the Society of American Foresters.

The 28-minute color film was written, directed, photographed and edited by Lewis W. Riley, former visual instruction editor in agricultural communication at the university and now a free-lance filmmaker. Henry W. Cheney of Clemson narrated the movie.

The Belle W. Baruch Research Institute's scientific and educational programs, although statewide, are centered at Hobcaw Barony, a 17,500-acre plantation located on a peninsula known as Waccamaw Neck near Georgetown.

"The Hobcaw Story" is available for showing by educational, civic, business and other groups. For information contact the Communications Center at Clemson University.

#### **Army ROTC Now Open to Rising Juniors Through Special Summer Program**

Clemson University has announced that its advanced Army ROTC program is open to junior college graduates, other students who transfer to Clemson after their sophomore college year, and rising Clemson juniors, if they attend a special six-week program at Ft. Knox, Ky., this summer.

Col. Thomas B. Maertens, professor of military science, said that under the ROTC Vitalization Act of 1964, junior college students and others who have not taken basic ROTC may qualify for advanced ROTC by attending either session of a six-week course that begins on June 14 or June 21.

Students taking the summer program will be paid at the rate of \$326 a month during the six weeks. They will also receive free room and board and reimbursement for transportation to and from Ft. Knox. Students admitted to advanced ROTC at Clemson receive an allowance of \$100 a month.

Faculty members who know of students who may be interested in enrolling in the summer program should have them contact Maertens at the Military Science Department (656-3107). He will interview prospective candidates until March 15.

#### **Zoology Department Will Host Conference On Bird-Aircraft Collision Problems**

When birds of a feather flock together, they're not always fine-feathered friends.

Especially around airplanes.

Aircraft have been colliding with birds ever since man learned how to get a flying machine up in the air and keep it there.

The first loss of human life because of a bird-airplane collision happened back in 1910. In the past 63 years the astonishing growth of air travel has been matched by the equally astonishing growth of the "fowl" trouble itself.

In 1960, 62 persons were killed when a Lockheed Electra ran into a flock of starlings on takeoff from Logan Field in Boston, Mass. A Viscount propjet collided with a flock of whistling swans over Ellicott City, Md., in 1962. Seventeen people died. Just last year a tragic crash of a Lear Jet at Atlanta's Peachtree Dekalb Airport was caused by birds sucked into the engines on takeoff. The result -- seven persons dead.

Even a single bird aloft can become a deadly living missile. In March 1963 a Beechcraft collided with a common loon near Bakersfield, Calif., causing a crash that killed the pilot and passenger.

While the problem might appear to be of sinister origin, like in Alfred Hitchcock's famous movie "The Birds," researchers here



Clemson University and elsewhere believe that the problem can be solved by learning more about the biological habits of birds.

To help bridge that knowledge gap, a conference on the biological aspects of the bird-aircraft collision problem will be held here Feb. 5-7 by Clemson's Zoology Department.

The conference is sponsored by the U.S. Air Force Office of Scientific Research and for good reason.

Since 1963 the problems of birds smashing into planes have cost the Air Force alone more than \$132-million in terms of training costs for lost pilots, destroyed aircraft and replacement of damaged parts.

In 1970 the Air Force sustained damage from 360 bird strikes, 383 in 1971, and 61 in 1972. The lower figure in 1972 was not the result of any new preventive measures, but was caused primarily by reduced low-level training activity by Strategic Air Command B-52's, according to Prof. Sidney A. Gauthreaux Jr., conference coordinator.

Statistics about commercial aircraft damage are less easy to obtain, he says, however, one airline has reported about \$2.4-million worth of mechanical damage each year, another a loss of \$2-million over five years, and a third airline reported 5 engine changes required because of bird-aircraft collisions in two and a half years of flying.

This conference is particularly important and timely because of the growing menace of bird collisions to both military and civilian aircraft operations," says Gauthreaux.

Gauthreaux says the conference will do three things:

- review the progress in basic studies of bird migration, population dynamics and ecology as they relate to hazards birds pose.

- outline specific plans and needs for future biological research on the problem.

- make plans for getting research findings and recommendations into the hands of all aviation groups, both civilian and military.

There will be papers presented on the feeding and roosting movements of birds in the vicinity of airports, gull populations and their control, solid waste management and bird problems near airports, and large soaring birds as aircraft hazards.

The conference will also cover particular groups of birds (swans, geese, hawks and vultures); the movement of small songbirds at night and shorebird and waterfowl migrations during the day and night; weather factors affecting mass movements of birds; and developments in the use of radar to identify and track bird migrations.

"When you consider that some of the more hazardous bird species -- gulls, starlings and blackbirds -- are increasing their populations at faster rates because of solid waste disposal practices, deforestation and other land use policies," Gauthreaux says, "the bird strike problem demands immediate and careful attention."

#### DEAN TREVILLIAN TO SERVE AS NASULGC COMMISSION MEMBER

Dr. Wallace D. Trevillian of Clemson University has been selected to serve as a member of the "Commission on Education for the Business Profession" of the National Association of State Universities and Land-Grant Colleges (NASULGC).

Trevillian is dean of Clemson's College of Industrial Management and Textile Science.

His commission appointment is for three years. He joins 14 other members consisting of university presidents and deans from NASULGC institutions.

The commission addresses itself to questions, problems and issues relating to business schools, and provides a forum within the association for people who work closely with deans of business schools.

Trevillian has been dean of the College of Industrial Management and Textile Science since 1963. The college is unique among professional schools preparing students for business careers.

It offers 14 undergraduate and graduate degree programs in management, textiles accounting, finance, economics, textile chemistry, and the Clemson-Furman Master of Business Administration degree program jointly administered by Furman University and Clemson.

STUDENT UNION OFFICE  
BEGINS CALENDAR SERVICE

Coordination for scheduling of events: The University Student Union Office has begun a new service for campus organizations. A central calendar of events is being maintained by the Union for the use of any organization or department in determining the best time to schedule events. The Union will list events which may attract a significant number of people in order that conflicts can be avoided. While it is purely voluntary, it is requested that whenever a group schedules such an activity, the Union office in the YMCA be notified (no matter how far in advance). If you wish to check our calendar to find an open date, please come by in person. The calendar is currently being maintained by a part-time employee, so please adhere to the following schedule when making inquiries: Mornings on Mondays and Tuesdays, Afternoons Wednesday thru Fridays. Of course mail will be accepted at any time. Simply address for campus mail to University Union, YMCA, Campus. Outside mail should be addressed to Box 312, Clemson, S.C. 29631.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, JANUARY 7, 1974

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Joseph B. McDevitt, Walter T. Cox, Luther P. Anderson, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Leon Roswal, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis, and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of December 3, 1973 were approved as submitted.

2. Recommendation Concerning Grades and Withdrawal Policy

The following recommendation was approved for undergraduate students only, effective January, 1974, and would replace the WP and WF grades described on page 102 of the 1973-74 Clemson University Announcements and all other sections not consonant with this recommendation.

W-Withdrew. This grade indicates that the student withdrew from the course. No credit hours taken are recorded for the grade of W provided that the course is dropped prior to the last five weeks of classes in the semester. A student enrolled the last five weeks of classes shall have final grades recorded.

Also approved for undergraduate students only, effective January, 1974, was the amendment of the statement, "Withdrawal from the University," on pages 106 and 107 of the 1973-74 University Announcements as follows:

Withdrawal from the University. A student may withdraw from the University any time before the last five weeks of classes in the semester without having grades recorded. A student enrolled the last five weeks of classes shall have final semester grades recorded.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, JAN. 7, 1974 (Continued)

After the first withdrawal from college the student is eligible to continue his enrollment the following semester, provided he meets other applicable regulations. For each succeeding withdrawal, however, the student shall be ineligible to continue his enrollment the following semester unless there are extenuating circumstances approved by the Committee on Admissions and Continuing Enrollment.

Action: Approved.

3. Curriculum Changes

Statement and Recommendation: The Dean of the University recommends additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

I. COLLEGE OF ARCHITECTURE

A. New Graduate Course

Arch 859          Terminal Project, 3-15 cr. (0 and 9-45)

II. COLLEGE OF EDUCATION

A. Undergraduate Courses -- Schedule Change

MS 101	Fundamentals (Basic)	1 cr. (2 and 1)*
MS 102	National Defense (Basic)	1 cr. (2 and 1)*
MS 201	Introduction to Operations & Basic Tactics and Map and Aerial Photograph Reading (Basic)	1 cr. (2 and 1)*
MS 202	American Military History (Basic)	1 cr. (2 and 1)*

(\*) No increase in total hours, but a scheduling change to 2 hours of Leadership Lab once every 2 weeks instead of 1 hour per week as it now appears.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, JAN. 7, 1974 (Continued)

## III. COLLEGE OF LIBERAL ARTS

A. New Undergraduate Course:

Soc 433	Sociology of Aging	3 cr. (3 and 0)
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B. Undergraduate Course Changes:

Ger 301	Twentieth Century German Drama, 3 cr (3 and 0) (Replaces Ger 404.)	
Ger 302	Twentieth Century German Prose and Poetry (Replaces Ger 304.)	3 cr (3 and 0)
Ger 407	Early German Literature (Replaces Ger 303.)	3 cr (3 and 0)
Ger 408	German Classicism (Replaces Ger 405.)	3 cr (3 and 0)
Ger 409	The German Novelle (Replaces Ger 406.)	3 cr (3 and 0)
Ger 410	German Romanticism and Realism (Replaces Ger 403.)	3 cr (3 and 0)
PolSci 101	American National Government (Title and description change only.)	3 cr (3 and 0)
PolSci 371	Comparative European Politics (Change in title only.)	3 cr (3 and 0)
PolSci 372	Totalitarian Political Systems (Change in title only.)	3 cr (3 and 0)
PolSci 403	The American Congress (Title and description change only.)	3 cr (3 and 0)

Action: Approved.*E. N. Tyndall*E. N. Tyndall  
Secretary

ALGERNON SYDNEY SULLIVAN AWARD

The Scholarships and Awards Committee invites all faculty and staff members to submit nominations for the non-student recipient of this year's Sullivan Award, which will be presented on Honors and Awards Day, April 10, 1974. The award is described on page 90 of the 1971-72 University Announcements.

Algernon Sydney Sullivan Medallion. A valuable and artistic memorial, established by the Southern Society of New York in honor of its first president, is awarded each year by the University to a member of the graduating class and to one other person who has some interest in, association with, or relation to the institution, official or otherwise, of a nature as to make this form of recognition appropriate. The recipients of this award shall be chosen in recognition of their influence for good, their excellence in maintaining high ideals of living, their spiritual qualities, and their generous and disinterested service to others.

Nominations should be sent to Corinne Sawyer, 416 Strode Tower, by February 22, 1974.

Non-student recipients of the Sullivan Award for the past ten years have been:

1964	F. J. Jervey
1965	C. A. Arrington
1966	Virginia Earle Shanklin
1967	James Robert Roy Cooper
1968	James Francis Brynes
1969	Inez Watson
1970	George Hubert Aull
1971	Gaston Gage
1972	Gertrude Bailey
1973	Josephine Stribling Lazar

GRADUATE COUNCIL MINUTES, DECEMBER 3, 1973

A special session of the Graduate Council was called to order by Dean Schwartz. Those present were: Dr. Brown, Dr. Wooten (alternate for Dr. Gahan), Dr. Mandel, Dr. Camper, Dr. Matthews (alternate for Dr. Freeze), Professor Means, Dr. Gauthreaux, Dr. Dysart, Dr. Macaulay, and Mr. James Kelley.

The Council reviewed changes proposed by the Undergraduate Council which would replace the grades of "WP" and "WF" with "W." After a discussion period, a motion was made to exempt courses numbered 600 and above from the new withdrawal policy. The motion was seconded and approved with two dissenting votes.

A motion was made, seconded, and passed to adjourn.

GRADUATE COUNCIL MINUTES, DECEMBER 18, 1973

The meeting was called to order by Dean Schwartz. Those in attendance were: Dr. Brown, Dr. Wooten (alternate for Dr. Gahan), Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart, Dr. Macaulay, and Mr. Preston Brown. Mr. David Glocker, President of the Graduate Student Association, attended as a visitor.

The minutes of the November 9, 1973 Graduate Council meeting were approved as distributed.

Preliminary lists of masters and Ph.D. candidates for December 1973 graduation were distributed. A motion was made, seconded, and passed approving these candidates for graduation providing they receive satisfactory semester grades.

The Council appointed evaluation committees to review certain graduate programs as requested by the Commission on Higher Education. It was agreed that this information be sent to appropriate deans for their concurrence along with deadline dates and guidelines.

The College of Architecture submitted a proposal clarifying the requirements for the Master of Architecture degree via the 5-1 program. A motion was made to approve this request, seconded, and passed.

Dean Schwartz informed the Council that due to recent action of the Educational Council regarding the policy for withdrawal from courses, graduate students will remain under the "WP" and "WF" policy for the present time.

A motion was made, seconded, and passed to adjourn.

10 · February 1, 1974

MINUTES OF THE UNIVERSITY EXTENSION COUNCIL

Friday, November 30, 1973, 2:00 p.m., Room E103, Martin Hall

Members Present:

Dean Willis, Presiding  
Dr. Nelson Bauld  
Professor W. C. Capel  
Ms Janis Hunter ( for Mrs. Lillian Goldberg)  
Mr. David W. Howe  
Mr. Herbert W. Marett  
Professor Lawrence E. Nix ( for G. Kessler)  
Dr. C. N. Nolan  
Dr. Myrton A. Packer  
Professor Eugene Park  
Professor Suzanne Parks  
Professor Jim Washburn  
Professor Frederic T. Simon

Absent: Professor George von Tungeln

Dean Willis called the meeting to order at 2:05 p.m., welcomed the members and allowed the members to introduce themselves. Consideration of the need for a secretary was discussed, with Mrs. Parks volunteering to serve in this capacity.

Dean Willis informed the group we are now getting ready to begin planning for the Continuing Education Center. The planning committee composed of twenty-four persons representing all aspects and areas within the university is scheduled to meet December 7. The large group will probably be redesigned to include the ad hoc committees of working groups to form a nucleus of working committees currently involved in continuing education, as well as others, to begin the planning.

The group discussed the importance of beginning quickly, and moving carefully but quickly, toward identified goals because of the increased costs of construction. The proper procedures for contracting architectural and construction details will be worked through the appropriate university and state sources. Input to the committee is invited and can be channeled through the college representative.

The site for the center has not been officially selected. The group discussed the importance of a central location within the university complex allowing free access to the various resources. The importance of adequate parking facilities for this center was considered vital. It was encouraged to consider this as an important aspect of planning.



MINUTES OF THE UNIVERSITY EXTENSION COUNCIL, NOV. 30, 1973 (Continued)

The Continuing Education Unit which had been thoughtfully pursued by this committee last year and for which no guidelines could be obtained from the Southern Association of Colleges and Schools had been developed for Clemson and adopted. The ad hoc committee, Professors George von Tungeln, chairman, Nelson R. Bauld, and Fred T. Simon had developed a report which, after study, was accepted.

Guidelines have now been received from the Southern Association: The Continuing Education Unit Guidelines and Other Information; the Commission on Colleges, Southern Association of Colleges and Schools, Atlanta, Georgia, 1973. Copies were distributed to the committee members.

The ad hoc committee is to take their original report back for study and comparison with the guidelines. At the same time, the remainder of the group will review all the material. The next meeting will then be held for the purpose of review with reconsideration of the current problems, policies and procedures regarding the offering of C.E.U.'s at Clemson.

Some special problems and interests were discussed within the group pertaining to the future problem areas of full-time equivalents and C.E.U.'s

The meeting ended with the newer concept that continuing education is now thought of more as "lifelong learning experience."

The next meeting will be arranged when the material from the ad hoc committee has been compiled and studied for preplanning by the group. Professor von Tungeln will continue as chairman of the ad hoc committee.

Respectfully submitted,

Suzanne Parks, Recorder

Sam M. Willis, Chairman

MICROBIOLOGY

A research contract has been awarded for work on the biologic cleanup mechanism operating to remove chemicals from the effluent of a fly ash basin at a steam power plant at the Savannah River Project in Aiken. The contract was awarded by the U.S. AEC in the amount of \$50,000 for the first year of study. Dr. R. K. Guthrie is the principal investigator on the contract and will receive consultant assistance from Dr. Donald S. Cherry (Ph.D., Clemson 1973) now located at the Center for Environmental Studies at VPI and State University in Blacksburg, Va. A second year of the study has received preliminary approval at a similar funding rate.

MINUTES OF THE SCHOLARSHIPS AND AWARDS COMMITTEE MEETING, DEC. 6, 1973

The Scholarships and Awards Committee met at 3:30 p.m. in Room E-103 Martin Hall with Chairman Corinne Sawyer presiding. Committee members absent were: H. E. Morgan and P. A. Steiner.

The first order of business proposed by Dr. Sawyer was the approval of the October 10th minutes; the minutes were approved as received.

The second order of business was the approval of late applications for scholarships and the appropriate recipients of each scholarship. Individual recipients were presented and recommended by Colonel Bloss. The recommendations were discussed and approved by the Committee in a series of motions asked for by Dr. Sawyer; all motions were seconded and passed unanimously.

The third order of business was a discussion of two of the Poole Scholarships. In the first instance it was decided by the Committee that inasmuch as the Poole Scholarship was designed to attract the above average student, without regard to financial need of the student, that there should be no question of discontinuing the Scholarship if the student, having once been awarded the scholarship, should, through a change of major, for example, be given financial aid from other sources. In the second instance it was decided by the Committee that the Poole Scholarship could and should be offered earlier than it had been in the past to outstanding applicants to Clemson University. The first invitation for a 1974-1975 Poole Scholarship was authorized by the committee to be sent to a Clemson applicant with a 1500 SAT and a predicted GPR of 3.93 in his proposed major. The committee also agreed unanimously to begin invitations for the Pooles in January of 1974.

The fourth order of business introduced by Dr. Sawyer was prompted by a letter of protest from Professor Nelson R. Bauld. Dr. Bauld's letter centered upon the fact that there were several areas wherein differences existed between the policy and procedures statement formulated by the Scholarships and Awards sub-committee and approved by the committee and the policy and procedures statement approved by the Educational Council. The difference between the statement approved by the Scholarships and Awards Committee and the policy and procedures statement approved by the Educational Council was, in effect, due to the physical burden placed upon the staff of the Student Financial Aid Office by the request for the distribution of information concerning applicants for scholarships and financial aid. Colonel Bloss repeated that distribution of this information by the Office of Student Aid was an unmanageable burden in regard to manpower; he also repeated his offer to open his files to any member of the Committee, as representative of a College, who wished to review the files of any applicant. It was agreed in lengthy discussion that the Committee members would attempt a reconciliation of the two statements at a later meeting.

There being no further business, the meeting was adjourned at 4:45 p.m.

Alfred L. Recoulley, Secretary

MINUTES OF THE UNIVERSITY LIBRARY COMMITTEE, NOV. 12, 1973

Present: John R. Ray (Chairman), Hewitt D. Adams, Harriet Crim, Elizabeth B. Galloway, Opal S. Hipps, Ursula A. Holahan, Gordon E. Howard, Kenneth J. Russo, Donald B. Stafford, J. W. G. Gourlay (Secretary).

Minutes of the meeting of Sept. 10 had been approved as distributed.

Discussion of Clemson Student Senate Resolution No. R-73-65 dated 10/15/73 - Extension of Library Hours on Weekends for Study and Research Purposes Only.

Action: In response to the above resolution the committee unanimously agreed that space for study purposes be sought in buildings other than the library, and that the Secretary notify the Clemson Student Senate of this action.

Discussion of Clemson Student Senate Resolution No. R-73-56 dated 10/16/73 - (1) That the library hours be increased to 12:00 midnight on Sunday through Friday nights. (2) That serious study be given by the library staff to further increases during critical mid-term and final examination periods.

Action: The Committee unanimously reiterated the recommendation of the University Library Committee, March 12, 1973, that "because of the fact that first priority for the expenditure of library funds must be for the purchase of library books, the schedule of library hours remain as at the present time," and that the Secretary notify the Clemson Student Senate of this action and also draw attention to the fact that library hours for several years have been extended until 1:00 a.m. from the week end before final examinations until the night before the last day on which examinations are scheduled.

Mr. Gourlay discussed various standards and formulae which have been considered by various states in appropriating funds to libraries and illustrated the application of these formulae to the Clemson Library.

Time of next meeting - Jan. 14, 1974 at 3:30 p.m.

Clemson University Library



14 · February 1, 1974

## MINUTES OF THE MEETING OF THE FACULTY SENATE, DEC. 11, 1973

In the absence of President Fulton, Vice President West called the meeting to order at 4:15 p.m. The minutes for the November meeting were approved as circulated.

### President's Report

Vice President West reported that President Fulton had attended the Board of Trustees meeting, Nov. 18 and 19. At that meeting fees for the Summer Session, for part-time students, and for auditing students were increased. The trustees had also determined that the highest utility for the Clemson House is for student use, and they authorized and directed the Administration to make the necessary adjustments. Though present permanent tenants would be permitted to remain in the Clemson House, no new such tenants would be permitted. Finally, the seventh floor of the Clemson House would be reserved for general University use.

President Fulton had also attended the dedication of the Jervey Athletic Center on Nov. 19 and the presentation of the Charles Carter Newman Endowed Chair of Natural Resources Engineering on the same day. At the latter, Mr. J. W. Newman had emphasized the need for campus leadership to help resolve the controversy involving resource exploitation on the one hand and "unreasonable" conservation efforts on the other.

The Planning Council at its meeting on Nov. 20 had approved motions calling for the recording and distribution of minutes to members and for the recording and reading of recommendations and motions at the meetings. The University Executive Officers approved all of these motions from the Council with the sole exception that the Newsletter will publish only official action taken on recommendations submitted by the Council.

The problems of bicyclists had occupied most of the attention of the Council at the meeting. It was announced that beginning in the spring semester of 1974 the campus would be separated into two parking zones, with special decals issued for each one. After the beginning of the Spring Semester only President Edwards will have a reserved space.

The Educational Council at its meeting on Dec. 3 had considered the Senate Resolution of June 13, 1972, concerning replacement of the present WP-WF system by W which would be granted up to the last five weeks of classes. The Undergraduate Council had recommended approval of the new policy to Dean Hurst. At the Educational Council meeting, Dean Schwartz had requested an opportunity for the Graduate Council to consider the proposal. The Educational Council planned to vote on the new policy by mail ballot; if approved, the new policy would go into effect for the spring semester of 1974.



MINUTES OF THE MEETING OF THE FACULTY SENATE, DEC. 11, 1973 (Continued)

President Edwards was reported to have been highly complimentary of articles appearing in the Tiger on faculty salaries and on the energy crisis. Ms. Marilyn Thompson, the Tiger reporter, had discussed the salaries with President Edwards, then with President Edwards and Dean Hurst, and finally with President Fulton. Dean Hurst had given Ms. Thompson the salary tables in the presence of President Edwards. President Fulton, while being highly complimentary of the articles, expressed regret that they had not mentioned the assurance given by President Edwards that in future budgets the University would continue to make faculty salaries more nearly competitive with those of other universities if money becomes available. In connection with this matter, it was reported that Mr. Wilson will be unable to visit other schools to obtain salary information until the 1974-1975 budget is more nearly settled. However, President Edwards has assured President Fulton that such information will be obtained for review by all the deans before the new budget is finalized.

At a meeting on Dec. 4, Dean Hurst had told President Fulton that President Edwards had delegated to Admiral McDevitt the matter of the Resolution on Annual Leave (Vacation) for 12-month faculty. At the suggestion of Dean Hurst, Admiral McDevitt, Dean Hurst, President Fulton and Professor Dillon would meet soon to discuss the Resolution. President Fulton had also presented to Dean Hurst the Senate Resolution of March 12, 1972, on the matter of vendor contracts, as suggested by the Senate's Policy Committee.

At the AFSC meeting in December the possibility of misunderstandings regarding the University Class Attendance Policy was discussed. A clarification of the AFSC position was submitted for publication by the Newsletter. Also at the AFSC meeting the Faculty Senate's Resolution on Student Parking of Mar. 13, 1973, was called to the attention of Col. McCarter. Col. McCarter stated that the matter would be added to the agenda for the December meeting of the University Traffic and Parking Committee, which he chairs.

Vice Pres. West read to the Senators a Student Senate resolution which would require faculty members to distribute a written statement on their attendance policies during the first week of classes. A similar resolution had failed in the Faculty Senate on July 10, 1973. The Faculty Senate's Admissions and Scholarship Committee will give consideration to a modified version of the Resolution in which the faculty members might be requested (not required) to state (not distribute) their attendance policies.

Vice Pres. West then read a letter from Adm. McDevitt to Pres. Fulton regarding parking policies. On the question of raising fines to discourage illegal parking, Adm. McDevitt noted that there is such opposition to that suggestion from students that he would instead advocate stricter enforcement of the existing rules. He also noted that more students are being used to enforce the rules, and that faculty and staff members will have more parking flexibility when Phase II of the parking policy is instituted in January.

MINUTES OF THE MEETING OF THE FACULTY SENATE, DEC. 11, 1973 (Continued)

The Senators discussed parking problems on the campus. Prof. Cross, a member of the University Traffic and Parking Committee, stated that Adm. McDevitt had suggested that the request for higher fines be resubmitted. Prof. Cross also noted that more than 900 temporary parking stickers had been issued so far during the fall semester. Prof. Skelton inquired as to the need for making such permits "indefinite" but got no explanation. Prof. Roberts pointed out that the parking fines seem to be considered more a means of raising revenue than of discouraging illegal parking.

At the Undergraduate Council meeting on Dec. 7 it was reported that the Senate's RESOLUTION PRESCRIBING GPR FOR GRADUATES IN MAJOR (FS-73-6-2) was still being studied.

Committee Reports

For the Welfare Committee its chairman, Prof. Dillon, reported on further discussions with Prof. McLean regarding retirement policies. Regarding the matter of whether options other than those offered by TIAA-CREF might be taken, Prof. McLean had indicated that at the moment it seemed better just to try to open up the general question of other options with the State Legislature, rather than try to evaluate all possibilities. A meeting of the Welfare Committee with a representative from TIAA-CREF has been planned for January.

On the matter of housing for incoming faculty members, there was discussion of the possibility of having the Housing Office provide a list of housing available in the area. Prof. Beckwith, while acknowledging the desirability of such a service, pointed out that the Housing Office presently lacks personnel to provide it. Prof. Jacobus suggested that local realtors might simply provide information for a file to be kept in the Housing Office.

For the Advisory Committee for the Student Relations Committee, the chairman, Prof. Dillon, stated that a final report, incorporating some suggested change for the Student Relations Committee, will be made at the Feb. meeting of the Senate.

Prof. Shannon reported on the meeting of the Continuing Education Center Planning Committee held on Dec. 7. At that meeting, its Chairman, Dean Willis, had set up a subcommittee to make a list of the "essential ingredients" which should go into the Center. The sub-committee consists of Profs. G. von Tungeln, chairman, J. K. Johnson and R. Elliott, and Messrs. Gene Cathcart and Harry Durham; Prof. Shannon is attending these meetings for the Senate and Dean Willis is an ex-officio member. The subcommittee is to submit its report by the end of January. Dean Willis had expressed the hope that arrangements for an architect to design the Center could be made soon after the subcommittee makes its report.

MINUTES OF THE MEETING OF THE FACULTY SENATE, DEC. 11, 1973 (Continued)

Prof. Shannon also reported that the Committee to Establish a Club for Faculty and Staff has planned a party at the Alumni Center for Jan. 25. All members of the faculty and staff of the University will be welcome; a fee of \$3 will be charged, payable by Jan. 22. Invitations will be sent out early in Jan.

New Business

Prof. Beckwith introduced a RESOLUTION OF APPRECIATION (FS-73-12-1):

WHEREAS normal funding of academic programs makes it difficult to attract those faculty with the stature and expertise to strengthen and intensify efforts in particular areas, and

WHEREAS such faculty are of vital importance in teaching and research as a resource for existing programs as well as a catalyst for development of new research, be it

RESOLVED that the Faculty Senate of Clemson University recognizes the significance of the gift of Mr. and Mrs. J. Wilson Newman and requests the President of the University to express our appreciation to Mr. and Mrs. Newman for the establishment of the Charles Carter Newman Endowed Chair of Natural Resources Engineering. The Faculty Senate also reaffirms our pledge to continue to make the University faculty and quality of effort emanating therefrom worthy of the confidence shown by Mr. and Mrs. Newman in this Institution.

The Resolution passed unanimously.

Prof. Beckwith then introduced two energy conservation resolutions which would restore the University's 5 1/2 day schedule, require all freshmen students to live in University dormitories, and prohibit freshmen from registering or operating automobiles on campus. Prof. Roberts moved that the motions be tabled; his motion passed. Vice Pres. West requested the Welfare Committee to consider the longer week and the Policy Committee to consider the restrictions on freshmen.

Vice Pres. West noted that Pres. Fulton was attending a meeting of the Southern Association of Colleges and Schools in Houston and would be back for the Jan. meeting.

There being no further business, the Senate adjourned at 5:20 p.m.

Russell D. Shannon, Secretary

Members absent: D. O. Ezell; A. R. Abernathy; W. Baron; L. T. Fitch; H. J. Grove; J. D. Fulton; M. D. Sherrill.



## CHEMISTRY

O. J. Jacobus (Assoc Prof) presented an invited lecture at Symposium on Theoretical Chemistry, Stereochemistry, entitled, "<sup>1</sup>H NMR Spectroscopy and Stereo-Chemistry," at the Southwestern Regional ACS Meeting in El Paso, Texas on Dec. 6.

## CIVIL ENGINEERING

J. Edwin Clark (Assoc Prof) was elected President of the South Carolina Division of the Southern Section of the Institute of Traffic Engineers at the December meeting of the Division.

Subhash C. Anand (Assoc Prof) published an article entitled, "Stress Distribution Around Shallow Buried Rigid Pipes" in the Jan. issue of the Journal of the Structural Division, American Society of Civil Engineers. In addition, Dr. Anand has been invited to give a talk about the above paper at the annual meeting of the South Carolina Section of ASCE in Columbia on Feb. 1.

## COLLEGE OF ARCHITECTURE

Sam Wang (Assoc Prof) had a one-man exhibition of photoserigraphs at the Museum of Art at the University of Oregon from Nov. 19 to Jan. 7. One of his photoserigraphs was included in the Guild of South Carolina Artists Annual Exhibit held at the Columbia Museum. Another one was included in the Synthetic Color Exhibition at the University Galleries of the Southern Illinois University at Carbondale.

Sam Wang has completed a project in photography and photoserigraphy under a grant from the South Carolina State Arts Commission.

Ralph E. Knowland (Hd, Dept of Bldg Sci) was elected Chairman of the Southeast Region, Associated Schools of Construction, at the annual meeting in Clemson, Nov. 17, 1973.

Ireland Regnier (Assoc Prof, Dept of History and Visual Studies) is one of a two-man art exhibit which opened Dec. 9 at the Artists Gallery in Atlanta, Ga. Paintings and screen paintings are shown by Regnier while ceramic sculpture and ceramic murals are shown by Harold Nosti.



## ELECTRICAL AND COMPUTER ENGINEERING

J. W. Lathrop (Prof) presented an invited lecture, "The Crisis in LSI," in the Radiation Lecture Series at Melbourne, Fla. on Dec. 13.

## ELEMENTARY AND SECONDARY EDUCATION

James Matthews (Assoc Prof) spoke at the Winter Institute for Teachers and Principals of the Diocese of Charleston which was held at Columbia on Jan. 4. The topic was, "Legal Responsibilities of Principals."

Elizabeth Galloway (Asst Prof) conducted inservice training for the high school reading teachers in District Five, Anderson.

Elizabeth Galloway is a consultant to the ESAE Project in School District One, Anderson County.

Gordon W. Gray (Prof), Elizabeth Galloway and Teryle W. Carpenter (Instr) have had a monograph, "A Comparison of Individual Reading Gain" published in The Reading Teacher, January 1974, Volume 27, Number 4.

## ENGINEERING MECHANICS

Nelson R. Bauld, Jr. (Prof) has had accepted for publication a paper entitled, "Imperfection Sensitivity of Axially Compressed Stringer Reinforced Cylindrical Sandwich Shells." The paper will appear in the International Journal of Solids and Structures.

Nelson R. Bauld, Jr. has been invited to participate in a symposium on "Buckling of Structures" sponsored by the International Union of Theoretical and Applied Mechanics (IUTAM) at Harvard University, June 17-24, 1974.

E. Harry Law (Asst Prof) has been asked to serve on the Transportation Committee of the Applied Mechanics Division of the American Society of Mechanical Engineers, effective Jan. 1.

## FOOD SCIENCE

The following papers were presented at the 51st and 52nd annual meetings of the Southeastern and South Carolina Branches of the American Society for Microbiology, Nov. 9-10, 1973, Atlanta, Ga.

P. J. Baab (Grad Stu, Micro) and M. G. Johnson (Asst Prof), "Resistance of Vibrio parahaemolyticus to Sub-Lethal Heat."

H. W. Findley (Grad Stu, Micro) and M. G. Johnson, "Effect of Growth Rate in Chemostat on Sporulation Frequency of Clostridium perfringens."

W. M. Gray (Grad Stu, Micro) and M. G. Johnson, "Isolation of Obligate Anaerobes from Proteinaceous Foods."

## GEOLOGY

Recent publication of P. K. Birkhead (Assoc Prof) and G. H. Fraunfelter, "Some Stromatoporoids from Middle Devonian Rocks of Southern Illinois and Southeastern Missouri," Jour. of Paleont., v. 47, No. 6 (1973).

## MATHEMATICAL SCIENCES

William H. Ford (Asst Prof) and T. W. Ting have had the following article published recently: "Stability and Convergence of Difference Approximations to Pseudo-Parabolic Partial differential equations," Math. Comp., V. 27, 1973, p. 737.

C. B. Garcia (Asst Prof) was invited to speak on "Algorithms for the Computation of Solutions for Fixed Point Problems" by the Graduate School of Business Administration, University of Chicago, Jan. 24.

Genie Bartmess (Instr), as a member of the Facilities Planning and Management Committee of the American Association of Collegiate Registrars and Admissions Officers, is one of the authors of The Registrar's Guide to Facilities Planning and Management.

Robert F. Ling (Visit Assoc Prof) presented the following talks at the annual meeting of the American Statistical Association held in New York, Dec. 26-30: "A System for Interactive Data Analysis in Teaching and Research," and "Comparison of Several Algorithms for Computing Sample Means and Variances."

The review of Robert Schlaifer's book Computer Programs for Decision Analysis by Robert F. Ling appeared in the Dec. issue of the J. Amer. Statist. Assoc.

MATHEMATICAL SCIENCES (Continued)

Robert F. Ling (Visit Assoc Prof) authored a paper "The Expected Number of Components in Random Linear Graphs" which appeared in the October issue of the Annals of Probability.

PHYSICS AND ASTRONOMY

R. L. Chaplin (Prof) had a letter published in Physics Today, Vol. 27, p. 121, January 1974 entitled "Revise NSF Evaluations."

J. R. Ray (Assoc Prof) and J. C. Foster, Jr. (former Grad Stu) had a paper published in General Relativity and Gravitation, Vol. 4, No. 5, 1973, pp. 371-374 entitled "Tachyon Dust."

POLITICAL SCIENCE AND SOCIOLOGY

Helen Marie Fleishman (Asst Prof) delivered an invited address to the Southeastern Association on Mental Deficiency in Biloxi, Miss. in Dec. 1973 entitled: "New Perspectives in Retardation."

RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) led a workshop on "Increasing Your Person to Person Communication Skills" at the National Recreation and Park Association Southern Regional Forum in Atlanta, Jan. 10. The workshop was part of an experimental program, entitled "Innovative Recreation Programming."

ZOOLOGY

Byron R. Ingram (Asst Prof) and G. L. Ryals (former Res Asst) attended the annual meeting of the American Society of Zoologists at Houston, Texas, Dec. 27-30, 1973 and presented a paper entitled, "Laboratory responses of midge larvae to daylength and temperature" which will appear in the November issue of American Zoologists.

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CALENDAR OF CAMPUS EVENTS

- 1-2 -- University Union Movie: "White Lightning," Holtzendorff YMCA,  
7:10 & 9 p.m.
- 3 -- University Union Free Flick: "Son of Flubber" and "Captain Marvel  
Serial, Chapter 4," Holtzendorff YMCA, 8 p.m.
- 4 -- International Students Association "Thailand Nite," Holtzendorff YMCA,  
7 p.m.
- 4 -- Square Dance Short Course, sponsored by University Union and Department  
of Recreation and Park Administration, Food Industries Bldg., 7:30 p.m.
- 4-6 -- University Union Movie: "The Sterile Cuckoo," Holtzendorff YMCA,  
7:05 & 9 p.m.
- 4-March 1 -- College of Architecture Exhibition: "Indiana Landscape of Man,"  
architectural photographic exhibit, Lee Gallery
- Feb. 5 -- German Play
- 5 -- Speakers Bureau: David Brinkley of NBC News, Tillman Auditorium, 7 p.m.
- 5 -- First Aid Short Course, sponsored by University Union and Department of  
Recreation and Park Administration, Holtzendorff YMCA, 7:30 p.m.
- 5-7 -- Department of Zoology Conference on the Biological Aspects of the Bird  
Aircraft Collision Problem, sponsored by the Air Force Office of  
Scientific Research, Clemson House
- 6-7 -- Short Course in Construction Contract Management
- 7 -- Tip-Off Club Luncheon, Clemson House, 12 noon
- 7 -- College of Engineering Seminar: William J. Day of Davis and Floyd  
Engineers on "Joint Industrial and Municipal Wastewater Treatment in  
Regional Plants," Earle Auditorium, 4 p.m.
- 7-9 -- University Union Movie: "Man in the Wilderness," Holtzendorff YMCA
- 9 -- Clemson University Woman's Club, Festival of Arts, Hobbies and Hand-  
crafts, Clemson House, 1-6 p.m.
- 9 -- Architectural School Aptitude Test
- 10 -- University Union Fine Arts Film: "Illicit Interlude" and "Captain  
Marvel Serial, Chapter 5," Holtzendorff YMCA, 8 p.m.
- 11 -- German Film, Daniel Auditorium, 7 p.m.
- 11 -- Square Dance Short Course
- 12 -- First Aid Short Course



CALENDAR OF CAMPUS EVENTS Continued

- 12 -- Department of History presents Henry Steele Commager, Professor Emeritus of History at Amherst College, "American Enlightenment," 3:30 p.m., Daniel Auditorium.
- 12 -- University Union Concert: Terry Dee's Rock & Roll Circus, Tillman Auditorium, 8 p.m.
- 13 -- Basketball, Wake Forest, here
- 14 -- College of Engineering Seminar: Philip A. Lutin of Hensley-Schmidt, Inc. on "Designing Wastewater Treatment Facilities for Optimum Operation and Minimum Maintenance," Earle Auditorium, 4 p.m.
- 14 -- College of Liberal Arts Lecture Series, The Future of the American Presidency, Marian D. Irish, Senior Fellow, Woodrow Wilson International Center for Scholars, on "The President's Foreign Policy Machine," Daniel Auditorium, 3:30 p.m.
- 14-16 -- Clemson University Players, "Angel Street," an Elizabethan mystery drama, Daniel Auditorium, 8 p.m.
- 14-16 -- University Union Movie: "Rage," Holtzendorff YMCA, 7:05 & 9 p.m.

Clemson University Library

### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM

FEB 15 1974

Vol. 13

No. 12

February 15, 1974

## Quattlebaum Gift to Establish Engineering Professorships

Clemson alumnus and his wife have given the Clemson University Foundation a gift of real property having a net worth of 300,000 to establish one or more professorships in the university's College of Engineering.

The donors are Florence businessman Alexander McQueen Quattlebaum and his wife, Lucille Godfrey Quattlebaum.

The gift consists of a 102,000 square-foot storage warehouse on 8.4 acres located at Berdeen, N.C.

Quattlebaum has served as a Clemson trustee and formerly taught civil engineering at Clemson for five years. He is president and chairman of the board of Harlee-Quattlebaum Construction Co. of Florence.

Net income derived from the gift will support the College of Engineering professorship(s) which will be named the McQueen Quattlebaum Professorship in honor of Mr. Quattlebaum's father, a member of Clemson's Class of 1909.

Alex M. Quattlebaum was elected to the Clemson Board of Trustees in 1958 to a four-year term by the General Assembly. He was reelected in 1962, 1966, and 1970 to four-year terms.

The Conway native received his Clemson undergraduate degree in 1934. The following year, he took a master of science degree at Cornell University and also did additional graduate work at the University of Iowa.

Quattlebaum served with the Army Corps of Engineers in World War II. He has been connected with the S.C. Highway Department

in the materials testing laboratory and with the Tennessee Valley Authority.

He has served as vice president and president of the Carolinas Branch, Associated General Contractors of America, and is a fellow of the American Society of Civil Engineers.

## Hilton Head Conference Focuses on Textile Pollution Problems

A \$800-million bill facing the textile industry in meeting state and federal pollution control regulations by 1976 and the complex problems of meeting those requirements provided the backdrop for a major textiles conference held in Hilton Head Jan. 23-25.

Some 100 industry representatives, engineers and other experts in pollution control attended the three-day meeting, sponsored by Clemson University's Colleges of Engineering and Industrial Management and Textile Science, the S.C. Textile Manufacturers Association, and the S.C. Department of Health and Environmental Control.

In broad-brush terms, R. Kenneth Tinsley of the state's Office of Environmental Quality Control described the overall problem for South Carolina.

"We've completed a need-survey of municipalities just for construction of pollution control facilities for a five-year period and found that about \$750-million is required," he said.

The industrial sector (including textiles) and the private commercial sector -- apartment, condominium and subdivision builders and the like -- will probably each have to cough up that much or more, he said.

That works out to about \$865 per person in South Carolina over the five-year period. The consensus of the experts here was that those costs will inevitably hit the pockets of the man in the street, and in the case of the textile industry, will mean higher costs for the industry's products.

Learning how to meet the new guidelines and how to apply the latest pollution control technology most economically was the purpose of the conference.

The participants heard Environmental Protection Agency representatives discuss effluent guidelines for the textile industry; the effect of heavy metals and chemicals used in textile processing on the aquatic environment; and Best Practicable Control Technology (BPCT) and Best Available Control Technology (BACT).

Officials of the S.C. Department of Health and Environmental Control discussed the program and monitoring requirements to be imposed on the textile industry under the new National Pollutant Discharge Elimination System, designed to eliminate the discharge of pollutants into navigable water by 1985 and to attain wherever possible, water quality which provides for the protection and propagation of aquatic life and for recreation by July, 1983.

In an afternoon session J. L. Rizzo of Calgon Corp., Pittsburg, Pa., set the tone for the remainder of the conference: "Until recently, controls were not stringent, and it was not economically feasible to install extensive waste treatment facilities. Now, however, we are at the crossroads of economics, technology, and environmental pressure. It appears that textile manufacturing plants will have to conform to new standards or be forced to close their doors. The question which must now be answered is how treatment objectives can be accomplished most economically."

Speakers discussed several technological developments that might help meet those objectives economically, including "hyperfiltration" (a unique filtering process involving an "invisible" chemical membrane

that can separate textile chemicals from wastewater for re-use); carbon adsorption, which also provides recycled chemicals, is relatively inexpensive and labor free, and causes no air pollution; centrifugation; and pretreatment -- through biological, physical and chemical means -- of textile waste for discharge to municipal treatment plants.

Other sessions focused on energy recovery and conservation, and air pollution problems.

### **Extension Director O'Dell Receives Land Bank Award**

Clemson Cooperative Extension Service director Wayne T. O'Dell has received a special award for leadership in rural development programs in the state.

The citation is from the Federal Land Bank and Federal Intermediate Credit Bank of Columbia, given annually for "outstanding contributions to the progress of agriculture" in the state.

Robert A. Darr, president of the banks, made the presentation at a statewide farm meeting in Columbia.

"Dr. O'Dell's leadership in initiating and implementing far-sighted programs has encouraged and increased confidence among rural leaders in the development and execution of successful rural development programs," Darr said, adding:

"His leadership in organization, training, youth development, improvement of rural housing and health services will further enhance development of rural resources and help provide for greater economic development in South Carolina and the nation."

The "Land Bank and Credit Bank Award" is one of not more than four given in the four-state area of the Carolinas, Georgia and Florida served by the sponsoring banks.

Dr. O'Dell, Easley native, has been Extension Service director since 1969.



## University Physical Plant Aids Handicapped Students

The green and white van rolls to a gentle stop, a large platform slowly lowers mechanically to the pavement, and for a moment, you almost expect to see Raymond Burr emerge in his popular characterization as TV's "Ironside."

But the familiar backdrop of nearby dormitories and classroom buildings are reminders that this scene is taking place on the Clemson University campus -- a long way from the San Francisco beat of the talented police detective.

At Clemson, the Ironside-like van belongs to 24-year-old Bill Dickey, a senior student who has been paralyzed from the waist down since a gunshot accident almost six years ago.

Bill said the sight of his van making its daily route to and from classes in various buildings is probably as familiar to Clemson students as the Ironside van has become to millions of TV viewers. He drives the vehicle using hand controls to operate the accelerator and brake, and maneuvers his wheelchair in and out of the van with obvious self-assurance.

Bill's life and the lives of two other paraplegic students attending Clemson demonstrate daily that a physical disability and confinement to a wheelchair do not handicap the mind and need not deny someone a college education.

Jean Dunbar of Spartanburg, a victim of a 1951 polio epidemic, and Joan Roper ofasley who has a rare illness that affects the nervous system, are also Clemson students who, like Bill Dickey, have refused to allow a disability to halt their educational plans.

Although being handicapped places Bill, Jean, and Joan in a very small minority among Clemson's 8,800-plus student body, the special needs of these students have not gone unnoticed by the university administration.

President Robert C. Edwards and Roy Rochester, director of the Physical Plant Division, have maintained a special interest in the group. Since last fall,

Rochester has worked closely with the students on an individual basis to determine the problem areas they encounter in their day-to-day movement about the campus.

Out of this cooperative effort has come a number of physical alterations not only to the entrance areas of certain buildings to make them more easily accessible to a wheelchair, but also within the dormitories where Bill and Joan live.

"All of the changes were designed to make college life for these students a little easier," said Rochester. "Most of the problems they faced were relatively simple to solve," he said, "although to a person in a wheelchair they represented major obstacles."

To make it easier for the students to enter and leave the various buildings in which they have classes, numerous plywood ramps have been built and placed in position. Other ramps have been cut into sidewalks and streets, also making them an easy ride instead of a mountain to climb.



**THREE CLEMSON UNIVERSITY STUDENTS** who are pursuing a higher education despite confinement to wheelchairs talk with President Robert C. Edwards, left, and Roy Rochester, director of the Physical Plant Division, about the special needs of paraplegic students.

**Bulletin From Clemson  
Describes New Ornamentals**

A new publication of the South Carolina Agricultural Experiment Station describes some 20 new woody ornamental plants selected for their good performance over a long period of time in Clemson University's Horticultural Gardens.

For many years the horticulture department at Clemson has been evaluating new woody ornamentals from USDA and other sources.

"More plants are added to the evaluations each year," says John A. Floyd, Jr., agricultural science assistant in the department of horticulture and author of the new bulletin. "Promising new plant introduc-

tions are propagated and released to nurserymen for public use as they show superior characteristics."

Among the plants described in the bulletin are the "Ben Morrison Azalea," a pink-bicolor ornamental that grows four to six feet; the "Mrs. L.B.J. Azalea" which Floyd describes as the "best hose-in-hose white azalea in Clemson's collection, easily propagated in sand;" three new crape myrtles; a dwarf pomegranate suitable for pot growing; and a number of hollies and other ornamentals of interest to South Carolina gardeners.

The publication, "New Ornamental Plants for South Carolina," (Bulletin 571) is available through the Bulletin Room (656-3261).

MINUTES OF THE UNDERGRADUATE COUNCIL, DECEMBER 7, 1973

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Arline M. Duvall, Ralph W. Gilchrist, Jerome V. Reel, David L. Rowe, Edward A. Vaughn, Kenneth N. Vickery, and Spurgeon Cole (Visitor).

The minutes of the November 2, 1973, meeting were approved with one addition.

Dr. Cole, Chairman of the Committee on the Improvement of Undergraduate Teaching presented a brief report on the work of his committee. Several changes in the method of teacher evaluation by the students are under consideration.

College of Education

The following courses were approved:

MS	101	Fundamentals (Basic), 1 cr (2 and 1).
MS	102	National Defense (Basic), 1 cr (2 and 1).
MS	201	Introduction to Operations and Basic Tactics and Map and Aerial Photograph Reading (Basic), 1 cr (2 and 1).
MS	202	American Military History (Basic), 1 cr (2 and 1).

College of Liberal Arts

The following courses were approved:

Ger	301	Twentieth Century German Drama, 3 cr (3 and 0).
Ger	302	Twentieth Century German Prose and Poetry, 3 cr (3 and 0).
Ger	407	Early German Literature, 3 cr (3 and 0).
Ger	408	German Classicism, 3 cr (3 and 0).
Ger	409	The German Novelle, 3 cr (3 and 0).
Ger	410	German Romanticism and Realism, 3 cr (3 and 0).
Pol Sc	101	American National Government, 3 cr (3 and 0).
Pol Sc	371	Comparative European Politics, 3 cr (3 and 0).
Pol Sc	372	Totalitarian Political Systems, 3 cr (3 and 0).
Pol Sc	403	The American Congress, 3 cr (3 and 0).
Soc	433	Sociology of Aging, 3 cr (3 and 0).

College of Physical, Mathematical, and Biological Sciences

The following course was approved:

Zool	460	General Physiology, 4 cr (3 and 3).
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MINUTES OF THE UNDERGRADUATE COUNCIL, DEC. 7, 1973 (Continued)

Dean Vickery reported the results of a study of student Grade-Point Ratios on 300 and 400 level courses in the "Major Field." Students having an accumulative grade-point ratio of 2.20 or less and graduating in May 1973 were selected for the study. There were 753 bachelor's degrees awarded in May and 110 students had a grade-point ratio of 2.20 or less.

The 110 students in the study are described in the three categories below:

1. Seventy-four students had at least a 2.0 or higher in both the 300 level and 400 level courses of their "Major Field."
2. Sixteen students have less than a 2.0 in either the 300 level or 400 level courses of their "Major Field," but when the 300 level and the 400 level courses were combined the grade-point ratio was 2.0 or above.
3. Twenty students had less than a 2.0 grade-point ratio in their "Major Field" when the 300 level and 400 level courses were combined.

A recommendation on the Faculty Senate resolution prescribing a grade-point ratio for graduates in their major field will be presented at the next meeting of the Council.

BOTANY

Thomas M. McInnis, Jr. (Asst Prof) and A. Domnas (UNC - Chapel Hill) had the following research article published: The properties of trehalase from the mosquito-parasitizing water mold, Lagenidium sp. Journal of Invertebrate Pathology 22:313-320. 1973.

CHEMICAL ENGINEERING

F. C. Alley (Prof) presented paper, "Dispersion Modeling of Stack Emissions for Prediction of Pollutant Levels" at Textile Pollution Control Seminar, Jan. 25 at Hilton Head.

J. N. Beard, Jr. (Asst Prof) had a paper entitled, "A Simple Algorithm for the Time-Optimal Control of Chemical Processes" published in AIChE Journal, Vol. 20, No. 1, pp. 133-140 (1974) with Frank R. Groves, Jr. (LSU) and Adrain E. Johnson, Jr. (LSU).



## CHEMICAL ENGINEERING (Continued)

S. S. Melsheimer (Asst Prof) presented an invited lecture entitled, "Mathematical Modeling of Donnan Dialysis" at the University of South Carolina on Feb. 7 as part of the U.S.C. Engineering Seminars Series.

## CIVIL ENGINEERING

J. Edwin Clark (Assoc Prof) and H. Christian Nuckols, Jr. (former CE Grad Stu) recently had an article published in Traffic Quarterly, Volume XXVIII, No. 1, entitled "An Evaluation of State Driver Manuals."

Subhash C. Anand (Assoc Prof) and Marvin E. Criswell (Asst Prof, Colorado State Univ) have an article published in the Conference Preprint Volumes of the ASCE Conference on Civil Engineering Education, to be held at Ohio State University, Feb. 28 - Mar. 2. The article, entitled "Evaluation of a University - Industry Interaction Program," is based on a survey questionnaire completed by the participants of the NSF Summer Institute, "Structural Design: An Interaction Program between Educators and Practitioners," which was directed by Dr. Anand in July 1972 at the Illinois Institute of Technology, Chicago, Ill.

Herbert W. Busching (Assoc Prof and Hd) and J. Pat Cecil (Project Manager, Cecil's, Inc., Spartanburg) are co-authors of a paper, "Construction Education in Civil Engineering," to be presented at the ASCE Conference on Civil Engineering Education to be held Feb. 28 - Mar. 2 at Ohio State University.

James W. Epps (former Grad Stu) and Donald B. Stafford (Assoc Prof) presented a paper entitled, "Interchange Development Patterns on Interstate Highways in South Carolina" at the Annual Meeting of the Highway Research Board in Washington, D.C. on Jan. 22.

Donald B. Stafford, James T. Ligon (Prof, Agri Engr) and M. Eugene Nettles (former Grad Stu) presented a paper entitled, "Use of Aerial Photographs to Measure Land Use Changes in Watersheds" at the ASCE National Meeting on Water Resources Engineering in Los Angeles, Calif. on Jan 25.

## COLLEGE OF ENGINEERING

B. E. Gilliland (Asst to Dean) will discuss opportunities for women and minority groups in engineering before the Consulting Engineers of South Carolina on Feb. 18 in Columbia. Also on the program, dealing with women and minorities in engineering, will be Ms. Judith Maddox, National Treasurer of Society of Women Engineers, Mr. Jasper Salmond (Wilbur Smith and Assoc) and Congressman William Jennings Bryan Dorn (D, S.C.).

### CONTINUING ENGINEERING EDUCATION

A three-day conference, "The Fourth Annual South Carolina State Highway Conference," will be conducted on Wednesday, Feb. 20 - Friday, Feb. 22. The conference is being jointly sponsored by the Dept. of Civil Engineering, Clemson University, and the South Carolina State Highway Dept. President R. C. Edwards will deliver the welcome at the opening luncheon to be held at the Clemson House. J. Edwin Clark (Assoc Prof), Albert G. Law (Assoc Prof), Parviz F. Rad (Asst Prof), Freddy L. Roberts (Asst Prof), Donald B. Stafford (Assoc Prof), Herbert W. Busching (Assoc Prof and Hd), and J. P. Rostron (Prof), all of the Civil Engineering Dept. of Clemson University will deliver technical papers. Claire O. Caskey (Assoc Prof of English) will also deliver a paper. Hugh Macaulay (Alumni Prof, Econ) will be the Banquet Speaker. The conference will also have several top-level instructors from industry, government and the South Carolina State Highway Dept. who are recognized as being the forefront of their fields.

The Piedmont Chapter of the South Carolina Society of Professional Engineers and the College of Engineering of Clemson University will co-sponsor review classes to assist engineers in preparing to stand the second portion of the South Carolina Engineering Registration Examination. The classes will be held at Greenville Technical Education Center on Tuesday and Thursday evenings from Feb. 19 - Apr. 4. The review classes will be divided according to three disciplines - Civil Engineering, Mechanical Engineering, and Electrical Engineering. Instructors will present solutions to problems similar to those given on past registration examinations. The instructors are from the Civil Engineering, Mechanical Engineering and the Electrical and Computer Engineering Depts. of Clemson University.

The course "Layout and Interpretation of a Soils Exploration Program," will meet each Wednesday evening from 7:00 - 10:00 p.m. for three weeks beginning Feb. 13 and ending Feb. 27 at the Greenville Technical Education Center. The course is sponsored by the Dept. of Civil Engineering with William Baron (Assoc Prof) instructing. These Continuing Engineering Education Activities are coordinated by J. K. Johnson, Director of Continuing Engineering Education.

## CHEMISTRY

J. W. Huffman (Prof) and J. J. Gibbs (Grad Stu) presented a paper, "Preparation and Stereochemistry of 6-Ketodehydroabietanes," at the 5th Natural Products Symposium, University of the West Indies, Kingston, Jamaica, Jan. 8.

## ECONOMICS

Bruce Yandle (Assoc Prof and Hd) has an article, "Products Liability, Risk, and Economic Efficiency," accepted for publication in The Journal of Risk and Insurance, the official publication of the American Risk and Insurance Association.

Hugh Macaulay (Alumni Prof) delivered an address to the Lubbock, Texas Economic Council, Jan. 25.

Russell Shannon (Assoc Prof) published "Trade Reform: An Economist's View" in the November 1973 issue of The Clemson University Textile Marketing Letter.

Ralph T. Byrns (Asst Prof) presented a paper entitled "The Effects of Inflation and Deflation on the Efficiency of the Price System as a Signal Generator" to the faculty and students of the College of Business at the University of North Carolina, Charlotte, Jan. 30.

Holly Ulbrich (Asst Prof) and Lowell Nordquist (Instr) have just completed a research report, "The Economic Cost of Crime," for the South Carolina Department of Corrections.

Paul Zipin (Asst Prof) has an article appearing in the Review of Industrial Management and Textile Science entitled, "An Analysis of a JOBS Program at a Textile Plant."

## ENGLISH

Milton S. Van Hoy (Instr) has published "Two Allusions to Hungary in Uncle Tom's Cabin" in the current issue of Phylon.

Rodney O. Rogers (Asst Prof) has published "Twain, Taine, and Lecky: The Genesis of a Passage in A Connecticut Yankee" in the December 1973 issue of Modern Language Quarterly.

Clarence Gohdes, James B. Duke Professor of English Emeritus at Duke University, will give a lecture, "America's Greatest Democrat in Literature," Wednesday, March 6 at 4:00 p.m. in Daniel Auditorium.

### ELEMENTARY AND SECONDARY EDUCATION

Teryle W. Carpenter (Instr) and Gordon W. Gray (Prof) have had a paper, "Cloze Assessment of Cultural Response Variation" published in the National Reading Conference Yearbook, (22nd), 1972, Volume I.

Barbara M. Raetsch (Asst Prof) conducted an in-service workshop program Jan. 25, on "Grouping for Instruction in the Secondary School" as part of the ESAA Project at Westside High School in Anderson.

### GEOLOGY

Recent publication: V. S. Griffin, Jr. (Assoc Prof), "Plate Tectonics and the Ouachita System in Texas, Oklahoma, and Arkansas: Discussion," Geological Society of America Bulletin, v. 85, p. 145 (1974).

### HORTICULTURE

The following papers were presented at the Third Annual South Carolina-Georgia Peach Council, held in Charleston, Jan. 13-16. "New Developments in Chemical Weed Control for Peaches," by C. E. Gambrell, Jr. (Asst Prof); "Recent Developments in the Postharvest Handling of Peaches," by E. T. Sims, Jr. (Prof); and "Plant Growth Regulators for Peaches," by G. E. Stembridge (Prof).

### HOME ECONOMICS

Veronica Carmack (Asst Prof) and Joyce Jenkins (Instr) participated in the Southeastern Regional Family Economics - Home Management Conference, Feb. 13-15 at the University of Georgia, Athens.

Julia Taylor (Assoc Prof) participated in the National Extension Home Furnishings Workshop, Jan. 28 - Feb. 2 in San Francisco, Calif.

### INDUSTRIAL MANAGEMENT

E. Earl Burch (Asst Prof) and William R. Henry were editors for Proceedings, Ninth Annual Meeting of the Southeastern Chapter of the Institute of Management Sciences, Vol. III.

E. Earl Burch and William R. Henry, "Opportunities and Incremental Costs: A Comment," The Accounting Review (January, 1974), pp. 118-123.

E. Earl Burch, "Productivity, Its Meaning and Measurement," accepted for publication in Atlanta Economic Review.



OFFICE OF PROFESSIONAL DEVELOPMENT

A short course, "Safety and Health in Textile Manufacturing" will be sponsored by the Office of Professional Development and the College of Industrial Management and Textile Science, Feb. 19-22. The intent of the course is to provide training to Federal and State Compliance Safety and Health Officer's concerning safety and health requirements in textile manufacturing. The course is designed to instruct compliance officers in textile manufacturing operations and the application of OSHA standards in textile operations. D. W. Lyons (Assoc Prof of Textiles and Mech Engr) is the chairman of the course.

J. Page Crouch (Assoc Prof of Ind Ed) will be the chairman of a course entitled, "Media Applications Workshop in Industrial Training" on Mar. 13-14 at the Ramada Inn in Greenville. This workshop is primarily intended for Training Directors, Training Specialists, Educational Media Specialists and/or any person in industry that has a need to know how to develop and organize an audio-visual program or presentations for use as a training tool. The course is sponsored by the College of Industrial Management and Textile Science, the College of Education and the Office of Professional Development.

INTERDISCIPLINARY STUDIES

M. Spector (Asst Prof) has received an Edwards ion beam etching device on indefinite loan from the Cellular Analytical Laboratory at NASA/Lyndon B. Johnson Space Center in Houston, Texas. Dr. Spector will be utilizing the ion beam etching device (valued at approximately \$2500) in conjunction with scanning electron microscopy to study normal and diseased cell ultrastructure.

M. Spector has had a paper entitled "Ion Beam Etching of Red Blood Cells and Latex Spheres" published in the January 4th issue of Nature, 247, 61 (1974). S. L. Kimzey and L. Burns of the Cellular Analytical Laboratory at NASA/Lyndon B. Johnson Space Center were co-authors.

MATHEMATICAL SCIENCES

The following faculty members presented papers at the eightieth annual meeting of the American Mathematical Society which which was held at the San Francisco Hilton Hotel in San Francisco, Calif. from Jan. 15-18:  
 Renu Laskar (Assoc Prof) - "Partial geometry of dimension three." J. V. Brawley (Prof) - "Scalar polynomial functions on the  $n \times n$  matrices over a finite field." Donald R. LaTorre (Assoc Prof) - "Semilattices of bisimple left unipotent semi-groups." Dr. Brawley also chaired the session on Algebraic Number Theory and Field Theory.

J. V. Brawley delivered a lecture to mathematics students and faculty at Winthrop College, Rock Hill, on Jan. 29.

## MECHANICAL ENGINEERING

W. E. Castro (Prof) presented a paper entitled, "The Evaluation of Macro-brochium Shrimp Larvae Tank Designs and Support Systems," at the Fifth Annual World Mariculture Society meeting held in Charleston, Jan. 21-25.

## PHYSICS AND ASTRONOMY

D. P. Miller (Assoc Prof) and L. A. Duvall (former Grad Stu) had a paper published in Inorg. Chem., Vol. 13, p. 120, 1974 entitled "Solid Coordination Compounds of Alkali Metal Salts with a Neutral Aromatic Amine. II. Crystal Structures."

## PLANT PATHOLOGY AND PHYSIOLOGY

The following papers were published by staff members of the Plant Pathology and Physiology Dept: L. W. Baxter (Prof), Judy Beth Sheppard and Martha Hawes. 1973. Studies on the use of griseofulvin for controlling camellia dieback and/or canker. Carolina Camellias 24 (1):19-23.

O. W. Barnett (Asst Prof) and L. W. Baxter. 1973. Cucumber mosaic virus on Nandina domestica in South Carolina. Plant Disease Reporter 57:917-920.

N. D. Camper (Assoc Prof) has received a research grant of \$20,000 from Cotton Incorporated for the period of July 1, 1973 to June 30, 1974, for studies involving Soil Microbial-Herbicide Interactions.

N. D. Camper and G. E. Carter attended the 27th annual meeting of the Southern Weed Science Society at Atlanta, Ga., Jan. 21-24. Dr. Camper presented a paper, co-authored by Dr. Carter, entitled, "Biological Activity of Substituted Dinitroaniline Herbicides in Bioassay Tests." Dr. Carter presented a paper, co-authored by Dr. Camper, entitled, "Potential Rapid Bioassay for Respiratory Inhibiting Herbicides." Dr. Camper served as chairman for one paper session and as a member of the Society's Student Interest Committee.

## POULTRY SCIENCE

M. A. "Dan" Boone (Prof) returned Jan. 1, 1974 from a two year tour of duty in Saigon, Rep. of Viet Nam. Dr. Boone was a member of the University of Florida team which served in an advisory capacity for the National Agricultural Institute (NAI) which is the largest of four Agricultural Colleges in South Viet Nam. He served as the Animal Science Advisor, participant training advisor and library advisor.

POLITICAL SCIENCE AND SOCIOLOGY

William C. Capel (Assoc Prof) has published a review of Bryan R. Roberts' book, Organizing Strangers. Poor Families in Guatemala City, in the Dec. 1973 issue of the South Eastern Latin Americanist.

Harold E. Albert (Assoc Prof) has published a review of The Anderson Papers, by Jack Anderson and George Clifford, which appeared in Choice, Vol. 10, No. 11, January, 1974, p. 1781.

Sue G. Garrett (Instr) has published a review of Between Land and Water: The Subsistence Ecology of the Miskito Indians, Eastern Nicaragua, by Bernard Nietschmann, in Southeastern Latin Americanist, Sept. 1973, Vol. XVII, No. 2, p. 12.

Sue G. Garrett has published a review of Life Cycles in Atchalan: The Diverse Careers of Certain Guatemalans, by Alexander Moore, in the South Eastern Latin Americanist Newsletter, Vol. XVII, No. 3, pp. 13-14 (December 1973).

Ronald J. Knapp (Asst Prof) has published a review of Tijuana: Urbanization in a Border Culture, by John A. Price, in Southeastern Latin Americanist, XVII, 3, 14, (December, 1973).

Mary Jeanne Reid Martz (Asst Prof) has written a chapter, "The Foreign Policy of Ecuador," for Latin American Foreign Policies (edited by Lorman Wilson and Harold David) which is to be published by the Johns Hopkins Press.

RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) has edited a book, Readings in Group Processes: Training for Recreation Leadership and Administration. Published by Simon and Schuster, Division of Selected Academic Readings. The volume became available on this campus in January 1974.

TEXTILE DEPARTMENT

E. I. Stearns (Prof and Hd) has been appointed chairman of the Sub-Committee on Scholarship Awards, Advisory Committee on Textile Management, Tri-County Technical Education Center, Pendleton.

U. S. Patent #3,781,909, "Reduced Iteration in Computer Color Matching," assigned to American Cyanamid Company, was issued to E. I. Stearns, Dec. 25, 1973.

MENTAL HEALTH SECTION, REDFERN HEATH CENTER

Donald K. Freeman, Jr., M.D. (Director, Mental Health Section), presented "Youth and Morpheus," a discussion of research and clinical studies on Clemson students' sleep, to the Carolinas Society for Adolescent Psychiatry in Greenville on January 25, 1974.

UNIVERSITY COUNSELING CENTER

The University Counseling Center is currently enrolling students in personal growth groups, study skills groups, and career planning groups. These groups are offered for students who are interested in increasing self-awareness, in improving study skills, and/or in finding a proper major, respectively. Faculty members should feel free to suggest these groups to their students or to call or come by the Center for further information.

Dr. Mulkeen attended an alcohol and drug abuse training session sponsored by U.S. Office of Education at the University of Miami, Florida. The program focused on planning and organizing strategies for responding to substance abuse in the community. He is chairman of the preventative education committee of the Pickens County Commission on Alcohol and Drug Abuse.



CALENDAR OF CAMPUS EVENTS

February 15, 1974

- 16 -- Basketball: Maryland, here
- 17 -- University Union Free Flick: "Son of the Sheik" and "Captain Marvel Serial, Chapter 6," Holtzendorff YMCA, 8 p.m.
- 18 -- Clemson University Concert Series, "America Singing," with the Paul Hill Chorale and Orchestra, Littlejohn Coliseum, 8 p.m.
- 18 -- International Student Association's "African Nite," Holtzendorff YMCA, 7 p.m.
- 18 -- College of Architecture: Theodore Roszak, New York City sculptor, discussing his work at an evening lecture
- 18-20 -- University Union Movie: "Little Fauss and Big Halsey," Holtzendorff YMCA, 7:15 & 9 p.m.
- 18 -- Square Dance Short Course, sponsored by University Union and the Department of Recreation and Park Administration
- 19 -- First Aid Short Course, sponsored by University Union and the Department of Recreation and Park Administration
- 20-22 -- College of Engineering: Three-day Technical Conference, "The Fourth Annual S.C. State Highway Conference," Clemson House and Lowry Hall
- 21 -- Tip-Off Club Luncheon, Clemson House, 12 noon
- 21-23 -- University Union Movie: "Omega Man," Holtzendorff YMCA, 7:15 & 9 p.m.
- 23 -- Basketball: N.C. State, here
- 23 -- Graduate Record Examination
- 24 -- University Union Free Flick: "Captain Marvel Serial, Chapter 7," Holtzendorff YMCA, 8 p.m.
- 25 -- Trustees Medal Finals, Daniel Auditorium, 7:30 p.m.
- 25 -- University Union Movie: "Scorpio," Holtzendorff YMCA, 7 & 9 p.m.
- 26 -- College of Nursing Lecture: "She is Risen," Wilma Scott Heide, President of the National Organization for Women (N.O.W.), Daniel Auditorium, 2 p.m.
- 26 -- First Aid Short Course
- 26-27 -- Short Course: Housing Inspection

CALENDAR OF CAMPUS EVENTS Continued

- 27 -- Basketball: Duke, here
- 28 -- College of Liberal Arts Lecture Series, The Future of the American Presidency: Dorothy James, Professor at Lehman College, City University of New York, on "The Institutionalization of the Presidency," Daniel Auditorium, 3:30 p.m.
- 28 -- Environmental Systems Engineering Seminar: Mr. John A. Little, Environmental Protection Agency, on "Water Quality Control Problem Areas -- with Case Histories," Earle Auditorium, 4 p.m.
- 28 -- University Union Fine Arts Film: "Virgin and the Gypsy," Lowry Auditorium, 8 p.m.
- 28 -- University Union Movie: "Magnificent 7 Ride," Holtzendorff YMCA, 7:15 & 9 p.m.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 13

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM

March 1, 1974

FEB 2 1974



PRESIDENT R.C. EDWARDS addresses representatives from the Columbia business community during their tour of Clemson on February 13.

## Members of State Organizations Tour Five Clemson Colleges

A group of 27 representatives from the Columbia business community toured Clemson University Feb. 13 to take a look at Clemson programs and facilities involved in industrial development in South Carolina.

The Clemson-industry "interface situation" -- and how the university and industry

interact to further industrial development -- was the general topic of the day-long meeting.

Organizations represented were the Committee of 100, sales arm of the Industrial Development Commission of Greater Columbia, Richland and Lexington Counties; Greater Columbia Chamber of Commerce; Lexington Chamber of Commerce; State Development Board; several industries; University of South Carolina; and news media.

Continued



2 • March 1, 1974

University officials briefed the group on current programs tying Clemson with the industrial sector, highlighting Clemson's facilities, equipment, research and development capabilities, and other industry-related resources.

The Columbia representatives toured five colleges already heavily involved in expanding services to state industry: Architecture, Agricultural Sciences, Engineering, Industrial Management and Textile Science, and Nursing.

Some of the programs examined include:

-- engineering: automated lathe control operations, continuing professional education services, and research involving biomedical technology, brick manufacture from harbor silt, coastal erosion, new low-cost housing technology, and textile chemicals reclamation.

-- agricultural science: development of new food products using South Carolina commodities (high protein peanut flakes and corn chips), new mechanization technology, and peach crop research.

-- industrial management and textile sciences: special research and educational programs of management and economics faculty as they relate to the industrial community, the Professional Development Program (continuing education), new technologies in weaving and knitting, basic fiber research, and methods for dealing with the dust on cotton problem.

-- architecture: eight public service projects, featuring a redevelopment project for the city of Walterboro.

-- computer capabilities: Clemson's advanced data processing equipment and its use in programs like information retrieval systems for the Greenville Public Health Department and a Governor's Office manpower development program.

-- nursing: the role of the college in health care delivery systems and the growth of programs in industrial nursing resulting from federal Occupational Health and Safety Act regulations.

## Hazardous Weather Policy Announced By State Budget and Control Board

The State Budget and Control Board approve the following policy governing work attendance by State employees in times of hazardous weather or other emergency conditions. The policy reads as follows:

Unless extremely serious weather or other emergency conditions prevail, no announcement will be made concerning the closing of State offices. Such announcements will be made, if considered advisable, by the Governor's Office.

If hazardous weather conditions make it impossible for an employee to get to his place of work, the employee shall be allowed to:

1. Make up the time lost from work at a time scheduled by the employing department;
2. Use accrued annual leave; or
3. Take leave without pay.

When unable to report to work due to weather conditions, employees should notify their supervisors if possible.

If hazardous conditions develop during a work day, the top administrative personnel of agencies in the Columbia area will be notified by the State Personnel Division whenever it is determined State employees should leave early. In such cases, employees may arrange for the time lost as specified above.

Agencies outside the Columbia area should deal directly with emergency situations on a local basis. In such instances, the appointing authorities should consult with their counterparts in other agencies of the area so that, when practicable, concerted action may be taken. Time lost, however, shall be charged in accordance with the provisions of this policy.

Those agencies which must be staffed at all times should develop emergency plans for providing transportation to and from work for the necessary personnel who cannot arrange transportation on their own. Approved Jan. 23, 1974, State Budget and Control Board.



## Bookstore Hurt By Paper Shortage

The energy crisis may soon create shortages in paper supplies and paper products in the Clemson University Bookstore, according to bookstore manager John C. Cureton.

"We have been advised by our major paper manufacturers and converters that the energy crisis will adversely affect our future orders for about 100 different paper items normally stocked, from graph paper to paper bags," he says.

All future orders will be allocated on the basis of last year's purchases, which means that a certain number of shortages can be expected, he says.

For the past four years bookstore orders have shown an annual increase of 10-12 per cent for all paper goods.

"Ultimately this situation will produce an acute problem with the publishing industry. Most authoritative persons predict this shortage will occur in early summer. However, they further predict most all initial orders will be filled, but re-orders and fill-ins will not," Cureton says.

## How To Report News of Campus Events

The Office of Public Relations is responsible for reporting news of campus events to both the public and the faculty and staff. Often there is a news release involved as well as a listing of the event in the Clemson Newsletter calendar. To be sure that your campus event item is handled properly, please submit the information to both the Director of University Information (Ross Cornwell) and the University Publications Editor (Boo Cheney).

In addition to the calendar that appears in the Clemson Newsletter, a Clemson University Calendar 1973/1974 is published for the businesses and organizations in the Clemson area. No internal distribution of this publication is made, except to the offices of the University Vice Presidents and Deans. This calendar contains only events which have wide public interest or which the public may attend.

Prevailing deadlines for inclusion in either the Newsletter calendar or the Clemson University Calendar 1973/1974 are as follows: Items to appear in the issue published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

Calendar items must include the event; college, department or organization sponsoring the event; the date, time and place; admission charge, if any; and whether the public is invited.

Minutes of the meeting of  
THE ADMINISTRATION-FACULTY-STUDENT COUNCIL  
CLEMSON UNIVERSITY  
Tuesday, December 4, 1973

Chairman David Rowe called the regular meeting of the AFSC to order at 4:00 p.m., in Sikes Hall Board Room.

All members of the Council were present except Frank Young and Joseph McDevitt (ex-officio).

ACTION: (Motion by Dr. Fulton) To clarify any misunderstandings, the Council wishes to point out that the item headed "A Suggested Clarification of Clemson's Current Class Attendance Policy" published on page 28 of the December 1, 1973 CLEMSON UNIVERSITY NEWSLETTER, was an attachment to the minutes of the AFSC meetings of October 2 and October 23 (which immediately preceded this item on the same page). It was not a recommendation by the AFSC as an official clarification of the class attendance policy.

ACTION: (Motion by Dr. Fulton) The minutes of the meeting of Tuesday, November 6, 1973 were approved as published.

The status of the Honor System bill passed by the Student Senate and a similar resolution later acted on by the Faculty Senate was discussed. The Council suggest that the Student Senate study what the Faculty Senate has recommended on the subject and if further discussion is required, bring the subject back to the AFSC.

Colonel McCarter indicated that the Parking Committee would consider the Faculty Senate Resolution of March 13, 1973 (on student parking) at their meeting later this week.

ACTION: (Motion by Dr. Steirer) The Council set the next regular meeting for Tuesday, February 5, 1974 at a time to be announced.

The call to adjourn came at 5:00 p.m.

MINUTES OF THE MEETING OF THE FACULTY SENATE, JANUARY 8, 1974

President Fulton called the meeting to order at 4:15 p.m. He announced that Professor Leon Seamon had been elected to fill the Senate position for the College of Liberal Arts vacated by Professor Arnold until August 1974. President Fulton then suggested some changes in the first two pages of the Minutes for the Senate meeting of Dec. 11. The minutes were approved as circulated incorporating the suggested changes.

President's Report

President Fulton announced that at the meeting of the Southern Association of Colleges and Schools, which he had attended Dec. 9-12 in Houston, the University's first-year post-reaccreditation report not only was accepted but was so well received that the requirement of a second-year report was waived. The fifth-year report still will be required. President Fulton also reported that Dean Hurst had been elected Secretary-Treasurer of the Conference of Academic Deans of the Southeast.

President Fulton reported that a faculty committee has been formed to advise Dean Hurst in the selection of a new Assistant Dean of Graduate Studies. In addition to all members of the Graduate Council, the committee consists of Professor Arline M. Duvall of the College of Nursing and the president of the Graduate Students Association. Next fall, when the new position is filled, the position of part-time assistant to the Dean of Graduate Studies, now filled by Professor Farrell B. Brown, will be abolished. President Fulton noted that Dean Hurst has not ruled out the possibility of withdrawing the new position if the budget situation becomes extremely tight.

On Dec. 19, President Fulton reported, he had met with Admiral McDevitt and Senator Dillon regarding the Senate's recommended leave policy for 12-month employees. President Fulton said that the Administration is willing to give 45-day carryover rights for annual leave for those 12-month faculty members "nearing retirement age." However, those faculty should be eligible for an emeritus title (i.e., should have spent 10 or more years at Clemson). Some retroactivity will probably be allowed. Dean Hurst, according to President Fulton, is not willing to consider additional leave nor more carryover rights for other 12-month faculty, since additional staff might have to be hired to get the work done. Also, Dean Hurst is unwilling to consider further changes until the matter of leave for 9-month faculty is settled by the Faculty Senate.

President Fulton reported that he had written to Deans Schwartz and Willis requesting that the President of the Faculty Senate be included on the mailing lists for announcements by the Graduate Council and the Extension Council; he already is on the mailing list for the Undergraduate Council. Both deans responded favorably.

MINUTES OF THE MEETING OF THE FACULTY SENATE, JAN. 8, 1974 (Continued)

At the meeting of the Educational Council on Jan. 4, President Fulton reported, it was stated that measures taken to conserve energy at the University had resulted in a savings of \$4000 between Nov. 20 and Dec. 20, 1973, over the amount spent in the same period in 1972. President Fulton also noted that two University Energy Conservation Committees will be formed, one to generate ideas, the other to implement them. President Edwards had told the Council that he wanted to "put the problems in the hands of those members of our family who ultimately must conserve energy." On the matter of motor vehicles, Vice President Wilson had told the Council that the present fleet of Motor Pool vehicles will be kept at least until Jan. 1, 1975, although some major repairs on cars may be necessary. Mr. Rochester, Director of Physical Plant, reported that, prior to the new speed limit, cars had averaged over 15 miles per gallon for all types of driving. Members of the Council reported that since Nov. 20 some fleet vehicles have averaged over 20 miles per gallon.

Finally, President Fulton noted that the Dec. 15 issue of the University Newsletter had contained a clarification of the AFSC views on the class attendance policy which had been printed in the Dec. 1 Newsletter.

Committee Reports

For the Policy Committee, its chairman, Professor Skelton, reported that his committee had discussed the procedures for selecting department heads. The committee recommended that the procedures remain as specified in the Faculty Manual. Regarding the Energy Conservation Resolutions introduced by Professor Beckwith at the Dec. meeting, the Committee had also discussed the possibilities of requiring all unmarried freshmen to reside in dormitories and of prohibiting freshmen from operating automobiles on campus. Professor Skelton stated that the Committee unanimously recommended that such changes not be implemented.

In response to a request for an explanation by Professor Beckwith, Professor Skelton pointed out that the dormitories already are filled. In response to Professor Baron's point that faculty members do not have a voice in determining who will be on the committees set up to select department heads, Professor Skelton stated that the matter could be given further consideration by the Policy Committee in the coming academic year.

For the Research Committee its chairman, Professor Bauld, said that the Committee would submit a Resolution to recommend the establishment of a Research Council for consideration at the Feb. meeting of the Senate.

For the Welfare Committee its chairman, Professor Dillon, introduced a RESOLUTION ON HOUSING (FS-74-1-1):



MINUTES OF THE MEETING OF THE FACULTY SENATE, JAN. 8, 1974 (Continued)

WHEREAS, the Welfare Committee of the Faculty Senate has delivered a formal statement relative to University housing and

WHEREAS, the Associate Director of Housing has replied to this statement,

BE IT RESOLVED that those items listed in the Formal Statement which have the concurrence of the Associate Director of Housing be implemented at the earliest possible time.

BE IT FURTHER RESOLVED that the Housing Office be directed to assemble and maintain a list of rental units other than University Housing units to be presented on request to any applicant who so desires.

BE IT FURTHER RESOLVED that the Housing Office be directed to offer any practicable assistance in the location of interim housing to any incoming member of the University family.

Items to be implemented at the earliest possible time:

1. Establishment of a refundable \$25 deposit for all applicants which is subject to return
  - a. if applicant removes his name from the list on obtaining other than University Housing;
  - b. if after being awarded housing the applicant provides 30 days notice prior to vacating.
2. A list of incoming faculty who may desire community housing is to be received by the Associate Director of Housing from the Dean of each College by May 1 of the academic year preceding the academic year of employment.
3. The establishment of a 4 year limit to the period of occupancy of University Housing by anyone who is housed in University Housing after July 1, 1974.
4. A list of terminations, sabbaticals and other leaves to be received by the Associate Director of Housing from the administration by May 1 of each year.

Professor Skelton pointed out that a list of housing is already available to incoming employees. President Fulton, noting that this is provided by Blue Key, referred to Dean Hurst's comment that a list provided by the University implies endorsement and may thus result in problems for the University involving questions

MINUTES OF THE MEETING OF THE FACULTY SENATE, JAN. 8, 1974 (Continued)

of discrimination. Professor Beckwith pointed out that department heads already help to provide housing for incoming faculty members and that it seemed reasonable to consolidate these efforts, as many universities already do.

The Resolution passed unanimously.

Professor Dillon also said that a questionnaire regarding leave for 9-month employees has been distributed.

For the Advisory Committee for the Student Relations Committee its chairman Professor Dillon, stated that a final report would be given at the Feb. Senate meeting.

Professor Cross reported on the Dec. 6 meeting of the Traffic Committee. In response to a Senate resolution of Mar. 13, 1973, the Committee agreed that only truly handicapped students (now numbering 8) should be granted special parking privileges and that those temporarily disabled be limited to 7 days, renewable as needed. The Committee recommended that the Traffic Ordinance be changed to require students to register cars within 24 hours after bringing them on campus. The Committee also recommended that the policy of allowing student leaders and part-time workers to park in faculty and staff areas be eliminated beginning with the 1974-75 academic year. Finally the Committee will reconsider parking privileges for graduate assistants and has indicated that they probably will have to use student parking areas beginning this fall.

Old Business

Professor Beckwith moved to bring the Energy Conservation Resolutions which he had introduced at the Dec. meeting off the table. His motion failed for want of a second. Prof. Beckwith then challenged the Senators to overlook their selfish desires and come up with some methods of their own to conserve energy. Professor Steirer pointed out that Professor Beckwith had been requested to provide data justifying his resolutions but that he had failed to do so. President Fulton stated that the resolutions could be reintroduced at a later meeting.

Announcements

President Fulton announced that there have been changes in the College of Engineering resulting from the elimination of the Dept. of Engineering Mechanics and the Dept. of Engineering Services. The faculty of the Dept. of Engineering Mechanics have become members of the faculty of other University departments. The Engineering Services Dept. has become the Division of Engineering Services. He also noted that for undergraduate classes the WP-WF system has been replaced by a W grade which will be granted up to five weeks prior to the end of classes each semester.

MINUTES OF THE MEETING OF THE FACULTY SENATE, JAN. 8, 1974 (Continued)

Professor Shannon announced that the Faculty Club social would be held Jan. 25 at the Alumni Center and encouraged all people interested in establishing such a club to attend.

Finally President Fulton described a University registration study which recommended that registration be held in Littlejohn Coliseum and submitted the report to the Policy Committee for consideration.

There being no further business, the meeting adjourned at 5:17 p.m.

Russell D. Shannon, Secretary

Member absent: D. O. Ezell.

CONTINUING ENGINEERING EDUCATION

The Departments of Mechanical Engineering and Chemical Engineering will jointly sponsor with the Office of the Governor through the South Carolina Energy Management Council a one day seminar on "Industrial Energy Conservation" which will be held Thursday, March 14, at the Clemson House. This seminar is directed towards energy conservation in industrial operation. The program is designed to present practical information on ways to improve plant operation to meet curtailed fuel supplies. The program participants were chosen for their broad knowledge in energy utilization and proven practical experience. Charles Hester (Assoc Dean) will deliver the opening statement and F. C. Alley (Prof, Chem Engr) and Craig Brandon (Assoc Prof, Mech Engr) will act as Session Chairmen. Speakers from industry and government will present papers at the seminar.

The Division of Interdisciplinary Studies, College of Engineering, through its Continuing Engineering Education Program will present a short course entitled "Electron Microscopy Techniques for Pathologists and Histologists." Classes will be held at Clemson University and the Greenville General Hospital, March through May, Mondays and Wednesdays. M. Spector (Asst Prof) will be the instructor. Topics will include: Fixation, Dehydration, and Embedding of Tissue; Ultramicrotomy; Electron Microscopy Stains; Principles of Electron Optics; Electron Microscope Operation; Biological Ultrastructure.

GRADUATE COUNCIL MINUTES, JANUARY 11, 1974

The Graduate Council meeting was called to order by Dean Schwartz. Those present were: Dr. Brown, Dr. Gahan, Dr. Mandel, Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart, Dr. Lyons (alternate for Dr. Macaulay), Mr. Preston Brown and Mr. James Kelley.

The minutes of the December 3 and December 18, 1973 meetings were approved as distributed.

The following new courses and changes were approved:

Fd Sc	625	Nutrition and Dietetics (Replaces Fd Sc 615)
* Po Sc	626	Government Organizational Theory
* Po Sc	628	American Defense Policy Analysis
Math	817	Stochastic Models in Operations Research I
Math	818	Stochastic Models in Operations Research II
Zool	660	General Physiology (change in credit hours)
Zool	810	Behavioral Ecology (Replaces Zool 805)
Zool	815	Physiological Ecology

\* The Council directed that the record show that the approval of the Political Science courses does not constitute or authorize any students to designate Political Science as a major or minor.

Dean Schwartz administratively approved the following courses which had been previously submitted to the Council:

Arch	859	Terminal Project
Bio E	880	Applied Health Engineering Laboratory

The following course was tabled pending receipt of a syllabus:

Math	813	Advanced Mathematical Programming
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Dr. Page, Head of Agricultural Chemical Services, submitted a request concerning residence requirements for Agricultural Chemical Services employees. The following motion was made, seconded, and passed.

All on-campus University employees may satisfy residence requirements by completing fifteen (15) semester hours of graduate credit during a twelve months period.



GRADUATE COUNCIL MINUTES, JANUARY 11, 1974 (Continued)

Dr. Lyons, Chairman of the Language subcommittee, distributed two recommendations for discussion and approval. These were approved with one (1) dissenting vote. A motion was made, seconded and approved to authorize Dean Schwartz to draft the wording to reflect the modified language requirements (for the catalog and other purposes) including the deletion of all references to broadening areas.

A motion was made to adjourn, seconded and passed.

CONTINUING ENGINEERING EDUCATION

The Civil Engineering Department will sponsor classes "Use of Computers in Structural Design" to be held four Monday evenings, March 11 - April 8 in Room 215, Lowry Hall. The purpose of this seminar is to provide (1) a general over-view of the computer programs which currently exist and their capability in the area of structural design, and (2) a detailed look at an existing computer program, with opportunity to practice in the use of this program. Subhash C. Anand (Assoc Prof), Rudolf E. Elling (Assoc Prof) and Jackson S. Love, Jr. (Asst Prof) of Civil Engineering will instruct the classes. Mr. Robert C. Coleman, Enwright Associates, Greenville will also be an instructor.

CIVIL ENGINEERING

Subhash C. Anand (Assoc Prof) and Vijay K. Garg (Sr Proj Engr, Electromotive Div, GM, Lagrange, Ill) have published a discussion of the paper entitled, "Elastic Plastic Analysis by Quadratic Programming" by Antone F. Sayegh and Moshe Rubinstein, in the Journal of the Engineering Mechanics Division, ASCE, 100, No. EM1, February 1974, pp. 128-130.

Parviz F. Rad (Asst Prof) has been elected to the membership of the American Concrete Institute, South Carolina Academy of Sciences, and International Association for Housing Science.

ENVIRONMENTAL SYSTEMS ENGINEERING

Edwin Iracki (Asst Prof) and Howard Malmstadt (Prof, Chem, Univ of Ill) published an article entitled, "A Computer-Controlled Automated System for Chemical Rate Methods" in American Laboratory, 6 (2), 56 (1974).

Edwin Iracki and David Park (Grad Stu) presented a paper entitled "Utilization of Correlation Analysis in Computer Assisted Reaction Rate Measurements" at the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Mar. 6 in Cleveland, Ohio.

COMPUTER ADVISORY COMMITTEE MINUTES, NOVEMBER 14, 1973

Present: R. F. Zant, presiding; J. L. Clark; S. E. Cromer; V. R. Harrell; G. Howard; R. J. Knapp; M. C. Palmer; J. C. Peck; J. L. Strom; M. L. Wolla; R. E. Chapel, recorder.

Minutes of the previous meeting were corrected and approved.

Dr. Zant announced several changes in subcommittee membership, as well as the formation of Ad Hoc Committee A on interface between the University Computer Advisory Committee and other offices and committees at Clemson. Current membership:

Ad Hoc Committee A

J. L. Strom, Chairman

J. C. Peck

M. L. Wolla

Technical Advisory Subcommittee

W. E. Gettys, Chairman

R. J. Berry

J. N. Gowdy

P. Monaghan

R. S. Schouest

R. F. Zant

Operations Subcommittee

C. E. Woodall, Chairman

J. K. Bryan

C. E. Cromer

J. P. Crouch

J. S. Lytle

J. C. Peck

J. A. Slaton

R. F. Zant

Non-Centralized Computing  
Facilities Committee

F. T. Simon, Chairman

V. R. Harrell

D. P. Miller

M. L. Wolla

R. F. Zant

Dr. Zant, who was a guest at the October meeting of the Project Coordinating Board of the Division of Information Systems Development, reported on that meeting Dr. Peck was appointed Director of the Division, to serve until June 30, 1974, and the duties and responsibilities of the Director and the Board were discussed.

Professor Palmer commented that utilization of Computer Center personnel by the Division had decreased as expertise was sought from other areas of the university.

Dr. Zant recapped the latest meetings of the Technical Advisory Subcommittee and the Operations Subcommittee. At the former, Professor Palmer discussed the computing environment he anticipated after installation of the IBM System 370 Model 158 in Dec. or Jan; in addition, policies and procedures relating to

COMPUTER ADVISORY COMMITTEE MINUTES, NOV. 14, 1973 (Continued)

communication line acquisition were reviewed. The latter meeting was devoted to software acquisition and use; the subcommittee will study the usage of existing software and the need for additional packages.

Dr. Zant reported that the Non-Centralized Computing Facilities Subcommittee, which have not yet met, intend to update the inventory of such facilities.

In response to a request at the previous meeting, Professor Palmer reviewed the organizational and budgetary structures of the Computer Center. Eleven persons currently hold joint appointments with the Center and other departments. The Center budget for fiscal 1973-74 is 1.15 million dollars.

Dr. Zant raised a series of questions concerning future computing needs of the university: Should the emphasis be on batch work or timesharing? Centralized computing or remote? Should fast batch service be stressed at the expense of regular batch? What about interactive facilities?

The ensuing discussion raised a number of related questions: What part should the Computer Center play; specifically, should other departments provide computing facilities open to all users? Is it the role of the using community to generate a projection of needs, and if so, are seminars and demonstrations needed to make users and potential users more aware of facilities, possible applications, and costs? What is the role of the Computer Advisory Committee in determining what we want, what we need, and what we can afford?

It was agreed that the expertise of the Committee and its subcommittees, as well as that of the Computer Center, should be made available to interested colleges and departments. Professor Palmer stated that the Computer Center Consultant Group, comprising Drs. Holman, Bryan, Lewallen, and Peck, are available and are actively seeking information from the various departments relative to long-term computing needs.

The members agreed that the Advisory Committee is a logical agency for the collection of such information and for its transmittal to appropriate offices.

A trial run of the proposed new Computer Center accounting system was displayed by Professor Palmer. The few bugs remaining in the system should be corrected in time for distribution to users of parallel accounting for Nov. Prof. Palmer will report the status of the new system, which records computer usage by functional component, at the next meeting.

A tentative holiday schedule for the Computer Center was proposed by the Director, who invited comments from users.

The question of whether to hold a meeting of the Committee in Dec. was left to the discretion of the Chairman.



MINUTES OF UNIVERSITY SCHEDULE COMMITTEE, FEBRUARY 7, 1974

The Schedule Committee met in Room 118, Brackett Hall with the following present: K. N. Vickery (Chairman), H. D. Adams, Ralph P. Ashworth, W. L. Ball, L. H. Brown, B. M. Cool, C. C. Davis, B. E. Dunkle, David Fleming, J. Alex Hash, Louis Henry, Julia Higgins, J. C. Hubbard, W. G. Hudson, John LaGrone, H. G. LeFort, W. R. Mattox, Jack L. Mooneyhan, C. M. McGee, F. L. Roberts, E. B. Rogers, R. C. Turner, W. C. Whitten, Jr.

Departmental course schedules for the first semester 1973-74 were distributed to departmental and college representatives. These schedules are to be revised for the first semester 1974-75 and returned to the Registration Office by Feb. 21. Schedule proofs will be furnished committee members on March 4, with printing scheduled for March 8. Pre-registration materials will be distributed beginning April 15, with advisors to be available April 16-18.

A distribution of course preferences of 1640 new students accepted through January 31, 1974 was distributed with a comparison with course preferences of students accepted a year earlier. Enrollment trends were discussed with their schedule implications.

The 1973-74 University Record with announcements for 1974-75 is expected to be ready for distribution prior to pre-registration in April.

MINUTES OF UNIVERSITY LIBRARY COMMITTEE, JANUARY 14, 1974

Present: John R. Ray (Chairman), Hewitt D. Adams, Elizabeth B. Galloway, Furman R. Gray, Anne L. Harshman, Judy Kline (for Ursula A. Holahan), Kenneth J. Russo, Donald B. Stafford, J. W. G. Gourlay (Secretary).

Minutes of the meeting of November 12 were approved.

Professor Adams raised a questions concerning the library privileges of Emeriti Faculty. Mr. Gourlay pointed out that when the rules concerning the use of the library were drawn up by the University Library Committee several years ago the question of special provision for Emeriti Faculty had not been considered. Therefore they now had the same borrowing privileges as the adult residents - a two-week loan privilege. After discussion Mr. Adams recommended that Emeriti Faculty have the same borrowing privileges that present faculty enjoy and that the privilege be withdrawn if abused. The recommendation was unanimously approved.

Mr. Gourlay commented on a number of items that he felt would be of interest to the Committee:



MINUTES OF UNIVERSITY LIBRARY COMMITTEE, JAN. 14, 1974 (Continued)

1. Indexes and Abstract Journals. Miss Myra Armistead, Documents Librarian had compiled Indexes and Abstract Journals in The Clemson University Library. This compilation was arranged by subject so that each student could quickly be made aware of the important indexing and abstracting sources that he should consult when making his literature search. The publication had been distributed. Miss Armistead would welcome any suggestions before updating it next January.
2. Miss Genevieve Reidy, Science Reference Librarian, was editor of the First Yearbook of the Clemson Reading Conference, and is the permanent editor of the annual proceedings of this Conference.
3. Miss Jane Harris, Library Technical Assistant, under the direction of Mr. Triche, is compiling an Author, Title and Subject listing of all South Carolina Experiment Station bulletins, circulars and Technical bulletins. This project will take several months to complete but when ready it will be a very quick reference guide for persons using the Experiment Stations publications.
4. Library Orientation. During the fall semester 1973, the reference staff of the Social Sciences and Humanities Division gave library orientation to 96 sections of Freshman English. This included 85 sections of English 101 and 11 sections of English 102. The English Department decided last summer to have the freshmen come for orientation during their first semester rather than in the second semester as in former years.

The orientation includes the basic arrangement of the library, the card catalog, visible file, Library of Congress classification system and some of the most used reference sources. A slide-tape presentation which was prepared by the Communications Center is a part of the orientation procedure. A follow-up exercise is completed by the students.

Time of next meeting - February 11, 1974 at 3:30 p.m.

J. W. Gordon Gourlay, Secretary

## BIOCHEMISTRY

J. K. Zimmerman (Asst Prof) is the author of an article entitled "Kinetically controlled association-dissociation reaction on gel chromatography" which appeared in Biochemistry 13:384.

J. K. Zimmerman gave a talk on Biochemistry at an ACS student affiliate meeting on Jan. 17.

## CHEMISTRY

N. P. Marullo (Prof), J. F. Allen (Assoc Prof), G. T. Cochran (former Grad Stu) and R. A. Lloyd (former Grad Stu), had the following paper published, "Solid Coordination Compounds of Alkali Metal Salts with a Neutral Aromatic Amine. I. Molecular Structure and Bonding," Inorganic Chemistry 13, 115 (1974).

Recent publication: Adolph Beyerlein (Assoc Prof) and Michael Stafford (Grad Stu), "Free Energy of Nearly Close Packed Strips of Hard Squares in a 'Brickwall' Configuration," J. Chem. Phys., 59, 3654.

## ENTOMOLOGY AND ECONOMIC ZOOLOGY

T. R. Adkins, Jr. (Prof), John A. DuRant (Assoc Prof, Pee Dee Station), S. B. Hays (Prof and Hd), A. W. Johnson (Asst Prof, Pee Dee Station), E. W. King (Prof), J. B. Kissam (Assoc Prof, Ext Serv), Raymond Noblet (Asst Prof), D. K. Pollet (Asst Prof, Ext Serv), B. M. Shepard (Asst Prof), T. E. Skelton (Assoc Prof), C. A. Thomas (Prof, Ext Serv), David C. Arnold (Grad Res Asst), Shelley W. Barbary (Grad Stu), John A. Bass (Grad Res Asst), Robert E. Moore (Grad Asst), Van Waddill (Grad Res Asst), and Robert P. West (Grad Res Asst) participated in the 48th Annual Meeting of the Southeastern Branch of the Entomological Society of America in Memphis, Tenn., Jan. 29-31. Thirteen scientific papers were presented by the Clemson representatives. S. B. Hays (Prof and Hd) assumed the duties of President of the Southeastern Branch of the Entomological Society for 1974. S. G. Turnipseed (Prof, Edisto Station) was elected a Member-at-Large of the Executive Committee of the Southeastern Branch of the Entomological Society for 1974.

J. D. Hair (Asst Prof) presented a seminar, "Measures of Niche and Their Application to Parasite Communities," to the Biology Department, The Citadel on Jan. 31.

E. W. King (Prof) participated in the Annual Meeting of S-89 Regional Committee on solid waste disposal at Auburn, Ala., Jan. 22-24.

ENTOMOLOGY AND ECONOMIC ZOOLOGY (Continued)

H. A. Loyacano (Asst Prof) attended the Annual Convention of Catfish Farmers of America in Memphis, Tenn., Jan. 31 - Feb. 2, where he prepared an exhibit for Regional Research Project S-83 and presented an invitational lecture, "Fish Culture and Hydroponics."

S. G. Turnipseed (Prof, Edisto Station) has been invited by the Editorial Committee to edit the Insect Pests of Soybeans section of the Annual Review of Entomology for 1976.

GEOLOGY

Recent publication: K. I. McConnell (former Undergrad Stu) and V. S. Griffin, Jr. (Assoc Prof), "Petrology of the Anderson Metagabbro," Geologic Notes, v. 17, 68.

V. S. Griffin, Jr. (Assoc Prof), "Plate Tectonics and the Ouachita System in Texas, Oklahoma, and Arkansas: Discussion," Geol. Society of America Bulletin, 85, 145 (1974).

R. D. Hatcher, Jr. (Assoc Prof) presented a seminar to the faculty and graduate students at the University of Georgia, Athens, Jan. 31, entitled, "Developmental Model for the Southern Appalachian, One Year Later."

HOME ECONOMICS

Veronica Carmack (Asst Prof) and W. A. Tinsley (Assoc Prof of Agri Econ) have received a \$61,000 grant from Extension Service, USDA, for a two-year project - "Computer Assisted Interdisciplinary Counseling Program in Family Resource Management."

HORTICULTURE

J. R. Haun (Assoc Prof) participated in a symposium on Crop Yield Modeling and Applications of Remote Sensing Data at the NASA Johnson Space Center, Houston, Texas, Jan. 10-11.

E. T. Sims, Jr. (Prof) served as chairman and presided over the Postharvest Horticulture Section, Southern Region, American Society for Horticultural Science at the annual meeting in Memphis, Feb. 3-6.

HORTICULTURE (Continued)

G. E. Stembridge (Prof) was elected Chairman of the Pomology Section, Southern Region, American Society for Horticultural Science for 1974-75.

The following papers were presented by departmental staff at the Memphis meetings, which were held in conjunction with the Southern Association of Agricultural Scientists:

R. A. Baumgardner (Assoc Prof), G. E. Stembridge (Prof), L. O. Van Blaricom (Prof), C. E. Hood (Assoc Prof, Ag E), and B. K. Webb (Prof, Ag E), "Postharvest Ripening of Mechanically Harvested and Spectra-Sorted Peaches."

D. O. Ezell (Assoc Prof), "Organic Gardening: What We have Done in South Carolina."

J. A. Floyd, Jr. (Grad Stu) and E. T. Sims, Jr. (Prof), "Color Determinations as Related to Senescence in Snapdragons (Antirrhinum majus L. 'Montazuma')." "

C. E. Gambrell, Jr. (Asst Prof), B. K. Webb and C. E. Hood, "Evaluation of Growth Regulators on Maturity Distribution of Peach Fruit After Once-Over Mechanical Harvesting."

J. R. Haun (Assoc Prof), "Evaluation of Environmental Factors in the Growth and Quality of 'Concord' Grapes."

Alta R. Kingman (Instr), A. J. Lewis III (Instr) and T. L. Senn (Prof and Hd), "Responses of Certain Horticultural Crops to Several Organic Materials."

Alta R. Kingman and T. L. Senn, "Investigations of the Growth Regulating Activities of Ascophyllum nodosum L. Using the Straight Growth of Avena Bioassay."

M. LeRon Robbins (Assoc Prof), "Influence of Drip Irrigation on Yield of Tomato and Cucumber and on Placenta Hollowness of Cucumber."

E. T. Sims, Jr., T. L. Jones (Asst Prof), C. E. Hood, and B. K. Webb, "Ripening and Storage Response of Fresh Market Tomatoes to Mechanical Harvesting and Handling."

E. T. Sims, Jr., C. E. Gambrell, Jr. (Asst Prof), B. K. Webb, and C. E. Hood "A Procedure for Evaluating the Quality of Mechanically Harvested Fresh Market Peaches."

G. E. Stembridge, R. A. Baumgardner, J. W. Raff (Research Officer Victoria, Australia, Dept Agr), and C. E. Gambrell, Jr. "Adapting Peaches to Once-Over Harvest with Growth Regulating Chemicals."



HORTICULTURE (Continued)

L. O. Van Blaricom (Prof), B. L. Hair (Grad Stu), and R. A. Baumgardner (Assoc Prof), "Characterization of Peach Cannery Liquid Waste."

MATHEMATICAL SCIENCES

Austin J. Lemoine (Asst Prof) has had the following article published recently, "Approximations for the repairman problem with two repair facilities, I: No spares," with D. L. Iglehart. Advances in Applied Probability 5(1973) 595.

MECHANICAL ENGINEERING

E. H. Law (Asst Prof) has been invited to serve as a session chairman at an International Conference on High Speed Ground Transportation at Arizona State University in January, 1975.

The Association of American Railroads has granted \$5000 to Clemson University under the Industrial Associates Program to further activities in the area of track/train dynamics.

PHYSICS AND ASTRONOMY

M. D. Sherrill (Assoc Prof) and W. A. Lindstrom (former Grad Stu) had an article published in Physics Letters, Vol. 46A, 2, December 1973, entitled, "Separation Dependence of the Coupling in Superconducting DC Transformers."

POULTRY SCIENCE

W. T. Derieux (Vet II) presented a paper, "Fowl Cholera - Is There Hope for Oral Vaccine?" on Jan. 11 at the National Turkey Federation Convention, St. Louis, Mo. and "Prevention of Fowl Cholera in Virginia," Jan. 22 at the Virginia Turkey Association, Harrisonburg, Va.

S. M. Hou (Grad Res Asst) presented a paper co-authored by J. E. Jones (Assoc Prof) and J. F. Dickey (Assoc Prof, Dairy Sci) at the Poultry Section of the Association of Southern Agricultural Scientists in Atlanta, Ga., Jan. 26-27. The title was "A new look at auditory sensitivity of birds."

D. E. Turk (Assoc Prof) published "Intestinal Parasitism and Nutrient Absorption" in the January issue of Federation Proceedings, Vol. 33: 106-111.

### POULTRY SCIENCE (Continued)

H. J. Kohne (Grad Res Asst) presented a paper co-authored by J. E. Jones (Assoc Prof) at the annual meeting of the Southern Regional Avian Environmental Bioengineering Study Group Jan 27-28 in Atlanta, Ga. The title was "The effectiveness of Coyden in controlling lung impairment caused by leucocytozoon infection in young turkeys."

### COLLEGE OF ENGINEERING

A research contract entitled, "Systems Engineering in Textile Manufacturing," has been awarded to the College of Engineering by Greenwood Mills in the amount of \$98,854. Work to be done under this contract involves basic development in process control transducers, systems design of computer controlled monitoring and sensing equipment in the production environment, the development of purchasing strategies of raw materials for use in greige mills, and the physical testing of yarn subjected to high rate of change load conditions. The faculty involved on the contract are Drs. Wilcox, Gowdy, Kane, Gilliland, and Wolla. Five graduate students are also involved in these studies.

Lyle C. Wilcox (Dean) has been appointed to a three-year term to serve on the American Society of Engineering Education Prizes and Awards Committee. Among other things, the Committee is responsible for the evaluation of nominees for the prestigious Frederick Emmons Terman Award to be presented at the 1974 ASEE Annual Meeting. Other Committee members are: Dr. Ernest Kuh, Dean of Engineering at the University of California, Berkeley, Dr. Andrew P. Sage, Head of Electrical Engineering, Southern Methodist University, Dallas, Texas and Dr. W. E. Lear, Dean of Engineering, University of Alabama.

GRADUATE COUNCIL MINUTES, FEBRUARY 8, 1974

The meeting of the Graduate Council was called to order by Dean Schwartz. Those present were: Dr. Brown, Dr. Wooten, (alternate for Dr. Gahan), Dr. Mandel, Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart, Dr. Macaulay, Mr. Preston Brown and Mr. James Kelley.

The minutes of the January 11, 1974 meeting were approved as distributed.

The following new courses and changes were approved:

Agron	806	Special Problems (change in credits)
En Sc	631	Public Health Administration
Ag Ed	889	Introduction to Research in Education (Replaces Ag Ed 891)
Ed	853	Administration and Supervision of Special Education
Math	813	Advanced Mathematical Programming (Change in title and content)

The following course was withdrawn:

Agric	701	Recent Advances in Agricultural Sciences
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Dean Schwartz discussed the need for the Council to make a decision regarding the Withdrawal Policy for graduate students. The following subcommittee was appointed and asked to bring a recommendation to the Council as soon as possible: Dr. Gauthreaux, chairman, Dr. Macaulay, Dr. Mandel, and Mr. Kelley.

A motion was made, seconded, and passed to approve the University-wide language policy as recommended by the subcommittee. It is proposed that:

The University-wide language requirement for doctoral degrees shall be discontinued. The language requirements for each doctoral degree will be established by the department administering the degree, and approved by the Dean of the College responsible for the degree program. If a doctoral degree program includes a language requirement, the details of the requirement and the procedures for satisfying the requirement will conform to the University policies established by the Graduate Council. The language requirement for each degree program will remain as presently defined unless revised requirements approved by the appropriate department head(s) and academic dean(s) are recorded with the Dean of Graduate Studies and University Research.

GRADUATE COUNCIL MINUTES, FEBRUARY 8, 1974 (Continued)

Dean Schwartz stated there was some confusion concerning transfer credit policy for non-degree students. After a discussion and checking the information stated in the graduate catalog, the Council agreed that the matter needed no further clarification and that the catalog does in fact state that a student may apply only up to twelve semester credit hours earned as a non-degree student irrespective of where the credit was awarded.

A motion was made, seconded, and passed to adjourn.



- 1-2 -- Clemson Little Theater presents Neil Simon's "The Last of the Red Hot Lovers," Food Industries Auditorium, 8 p.m.
- 4 -- Professor Ellis Scott, School of Business Administration, University of Georgia, futurist, will talk about long range "Horizon Planning," Lee Hall Gallery Auditorium, 8 p.m.
- 5 -- Chemistry Seminar: Charles U. Pittman Jr., University of Alabama, "Organo Metallic Polymers - Preparation and Application," 131 Brackett Hall, 4:30 p.m.
- 6 -- Dr. Paul C. Ragland, University of North Carolina at Chapel Hill, evening public lecture: Chemical Evolution of the Earth's Crust, Room 131 Brackett Hall, 7:30 p.m.
- 6 -- W. C. Fields "in person" featuring Murray Solomon sponsored by Student Union, Tillman Auditorium, 8 p.m.
- 6-29 -- "Student Traveling Exhibit (S.C. Art Schools Association)." An exhibition of student work from all member colleges of the association. Rudolph Lee Gallery, open 8 a.m.-4:30 p.m. weekdays.
- 7 -- Geology Seminar: Dr. Paul C. Ragland of U.N.C. AT Chapel Hill on "Diabase Dikes of the Eastern U. S. and Possible Relations to Plate Tectonics," Room 235 Brackett Hall, 9 a.m.
- 7 -- Clemson University Woman's Club, Spring Fashions, Clemson House, 3:45 p.m.
- 7 -- Hurok Operatic Quartet, with Joann Yockey, Joann Grillo, Giuseppe Campora and Robert Goodloe. Tillman Hall Auditorium, 8 p.m. Clemson University Concert series attraction.
- 7-9 -- "The Last of the Red Hot Lovers." Food Industries Auditorium, 8 p.m.
- 9 -- 1974 Tiger Drill Meet, State-wide Tri-Service JROTC Drill Meet, Littlejohn Coliseum, 8 a.m.
- 10 -- "The Magician," Student Union Fine Arts Film, Holtzendorff YMCA, 8 p.m.
- 11 -- FDA/NCA Low-Acid Food Supervisors School, P&AS Auditorium.
- 12 -- "Point, Counterpoint": Debate between conservative newspaper columnist James J. Kilpatrick and Karl Hess, Visiting Fellow at the Institute for Policy Studies (Washington, D.C.). A Clemson University Speakers Bureau presentation. Tillman Hall Auditorium, 7 p.m. Open to the public, admission free.
- 14 -- "The Future of the American Presidency Lecture Series, Part 10": Richard Nathan, Senior Fellow at Brookings Institution, discusses "The President and the Bureaucracy in Domestic Affairs." Daniel Hall Auditorium, 7:30 p.m. Open to the public, admission free.

### PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

CLEMSON UNIVERSITY LIBRARY

SOUTH CAROLINA ROOM March 15, 1974

Vol. 13

No. 14

MAR 13 1974

## Alumni Gifts Exceed One Million Dollars For Second Consecutive Year

Alumni gifts to Clemson University through the Alumni Loyalty Fund in 1973 exceeded one million dollars for the second consecutive year, increasing to \$4.4 million the total income of the Loyalty Fund since it began in 1956.

Alumni National President Lawrence Starkey of Atlanta, Ga., reports that Loyalty Fund gifts, including the Parents Fund, totaled \$1,098,637 in 1973.

The largest single gift was \$315,298 for the beginning of a fund that eventually will establish a chair of natural resources engineering in memory of the late Charles Carter Newman, former professor of horticulture at the university. The gift was made by Mr. and Mrs. J. Wilson Newman, a 1931 Clemson graduate, of Short Hills, N.J.

A second large gift of real property with a value of \$300,000 was made by Mr. and Mrs. Alex Quattlebaum of Florence, a 1934 Clemson graduate. Net income of the gift will be used for College of Engineering professorships in memory of the late McQueen Quattlebaum, a 1909 graduate and father of Mr. Alex Quattlebaum.

Total gifts for the year included four bequests of \$236,070 to be used for physical facilities, scholarships, and student loan funds.

A total of 4,495 alumni participated in the Loyalty Fund. Additionally, 114 non-alumni parents of Clemson students made gifts of \$3,958 to the Parents Fund, an auxiliary of the Loyalty Fund.

From unrestricted gifts the Alumni National Council made the following grants to

university programs: R. F. Poole Scholarships, \$18,000; alumni professorships and faculty development, \$49,575; Graduate School, \$7,000; student programs and facilities, \$4,000; University contingency fund, \$20,000; and the University endowment fund, \$6,161.

The Loyalty Fund also financed the operating budget of the Alumni Association, including publication of the University-Alumni publication, The Clemson World.

## 1974 Egg And Art Show Scheduled For April

Eggs are for more than scrambling.

In fact, eggs can inspire art. The skeptic who doubts it has never attended Clemson University's annual Egg and Art Show.

Adults and students of all ages are eligible to enter the exhibition. All work submitted must simply be an original effort of the artist and must contain one or more natural, painted, sculptured or manufactured eggs or feathers.

Dr. B. D. Barnett, head of the poultry science department at Clemson, says "Both graphic and three dimensional art is acceptable. Graphics include paintings, drawings, collages, egg shell mosaics and others. Three-dimensional entries include decorated eggs assemblages, mobiles, clay modeling, sculpture, wire sculpture and carvings."

Graphic art may be any size, according to Barnett, but three dimensional pieces must fit table space measuring 24 x 36 inches.

Application blanks for space at the exhibition must be submitted by April 8. They are now available at the Poultry



2 • March 15, 1974

Science Department, Clemson University, Clemson, 29631.

"All art teachers in the state are invited to encourage their students to enter," says Barnett. "Prizes ranging from \$5 to \$25 are given in the various categories and age groups."

The 1974 Egg and Art Show is scheduled April 11-14 in the Food Science Building on the Clemson campus. It is jointly sponsored by the poultry science department, Poultry Science Club, S.C. Poultry Improvement Association and the S.C. Commercial Egg Council.



A copy of *Textile Processing*, A new textbook on yarn processing, is presented to Clemson President Robert C. Edwards by A. K. Jensen, director of Clemson's Vocational Education Media Center, and John H. Marvin Jr., Clemson professor who wrote the book.

#### University Club Social Hour Planned

The University Club, open to Clemson faculty and staff members, will hold its second event on Friday, March 29. The social hour, from 5-7 p.m., will be held in the main floor lounge of the Clemson House. Tickets will be on sale for \$2 per person until Wednesday, March 27. For further information contact Russell Shannon, president, in the Economics Department, 209A Sirrine Hall, 656-3497.



Vince Ducker of Clemson's Communications Center won first prize with this photo titled "Tigerama," in the S. C. Employees Photo Contest.



Minutes of the meeting of  
THE ADMINISTRATION-FACULTY-STUDENT COUNCIL  
CLEMSON UNIVERSITY  
Tuesday, February 5, 1974

Chairman David Rowe called the regular meeting of the AFSC to order at 3:35 p.m., in Sikes Hall Board Room.

All members of the Council were present except William E. Findley.

ACTION:            There being no corrections, the minutes of the meeting of December 4, 1973 stood approved as distributed.

The Council discussed the current status of various resolutions, proposals, etc., including a class attendance proposal now being studied by the Undergraduate Council, the honor system proposals advanced by the Student and Faculty Senates and energy conservation recommendations.

The next meeting of the Council was set for 3:30 p.m., March 5. There being no further business the Council adjourned at 4:30 p.m.

MINUTES OF THE UNDERGRADUATE COUNCIL, FEBRUARY 1, 1974

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Edwin M. Coulter, Ralph W. Gilchrist, Malcolm J. Skove, Edward A. Vaughn, Kenneth N. Vickery, and John D. Fulton (Visitor).

The minutes of the December 7, 1973, meeting were approved as distributed.

College of Education

The following courses and course changes were approved:

Ag Ed	201	Introduction to Agricultural Education, 3 cr (2 and 3).
Ag Ed	401	Methods in Agricultural Education, 3 cr (2 and 3).
In Ed	312	Metal Processes, 3 cr (2 and 3).
In Ed	313	Arts and Crafts, 3 cr (1 and 6).
In Ed	415	Construction Practices, 3 cr (2 and 3). Delete In Ed 315.
In Ed	460	Introduction to Career Education, 3 cr (3 and 0).
Ed	429	Teacher as Manager, 3 cr (3 and 0).
Ed	476	Practicum in Instruction for Exceptional Children, 3 cr (1 and 6).

College of Liberal Arts

The following course was approved pending a change in course title and the listing of prerequisites, Pol Sci 101 and 102 or permission of instructor:

Pol Sc	425	The Budgetary Process, 3 cr (3 and 0).
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College of Physical, Mathematical, and Biological Sciences

The following courses and course changes were approved:

Ch	101	General Chemistry, 4 cr (3 and 3).
Zool	110	Integrated Basic Science as Related to Man I, 4 cr (3 and 3).
Zool	111	Integrated Basic Science as Related to Man II, 4 cr (3 and 3).

The Faculty Senate resolution prescribing a grade-point ratio for graduates in their major field was approved as follows:

WHEREAS it is now possible for students to graduate with a grade-point ratio of less than 2.00 in their major field of study,

MINUTES OF THE UNDERGRADUATE COUNCIL, FEB. 1, 1974 (Continued)

BE IT RESOLVED that the following be included in the Scholastic Regulations as listed in the 1972-73 Catalog on page 108 under the heading, "Special Graduation Requirements"

A cumulative grade-point ratio of 2.00 is required for graduation. (New material follows). In addition, a college or department will require a cumulative grade-point ratio of 2.00 in such courses as may be determined by that college or department as constituting the major field of study.

A committee consisting of Malcolm J. Skove (Chairman), Luther W. Baxter, Edward A. Vaughn, Rodney Sprott, and Kenneth N. Vickery was appointed to review and make recommendations relative to a proposed policy on class attendance.

AN ANALYSIS OF TAX SHELTERED ANNUITIES

The Welfare Committee of the Faculty Senate has recently compiled an analysis of tax sheltered annuities. The information provided in this report should be of interest to many members of the Clemson University faculty. Copies of these reports have been sent to each academic administrative unit on the basis of one report for every ten faculty members or a major fraction thereof. The reports should be available from the office of each department head. If you are interested, please inquire in your department in order that you may read a copy of this most informative report.

ANIMAL SCIENCE

The Animal Science Department has received a \$4,500 grant from the South Carolina Pork Board to partially finance the following research projects: Feed Additives for Pigs, Protein Levels for Swine, Ration Alternatives for Brood Sows. This research will be conducted under the supervision of D. L. Handlin (Assoc Prof) and J. C. McConnell (Asst Prof).

The Veterinary Research Institute of Syntex Research, Palo Alto, Calif., has made a grant to the Animal Science Department to conduct research to obtain hormone profiles in blood and tissue of Angus beef heifers during the estrus cycle. This is a \$9,600 grant and the research will be conducted under the supervision of J. R. Hill, Jr. (Prof) and A. R. Ellicott (Asst Prof).

## GRADUATE COUNCIL MINUTES, FEBRUARY 18, 1974

The Graduate Council held a special meeting February 18, 1974. Dean Schwartz called the meeting to order. Those present were: Dr. Pennscott for Dr. Freeze, Dr. Mandel, Dr. Gauthreaux, Dr. Dysart, Professor Means, Mr. James Kelley, Dr. Camper, Dr. McLellan for Dr. Gahan, and Dr. Lyons for Dr. Macaulay.

The minutes of the February 8, 1974 meeting were approved as distributed.

Dean Schwartz distributed Evaluation Committee reports as information. He indicated there would be a meeting with each college dean to discuss recommendations for programs which have been reviewed. Further information of the program review activity will be discussed at the next meeting to be held Monday, February 25, 1974\* at 3:00 p.m. in E-103 Martin Hall.

\* This meeting was rescheduled for Thursday, February 28, 1974.

## ANIMAL SCIENCE

Several staff members presented papers at the Southern Association of Agricultural Scientists, Memphis, Tenn., Feb. 3-6.

"Quality Polyunsaturated Pork I. Production," G. C. Skelley (Prof), D. L. Handlin (Assoc Prof), R. F. Borgman (Prof), J. C. Acton (Asst Prof), and J. C. McConnell (Asst Prof).

"Quality Polyunsaturated Pork II Fat Analyses," R. F. Borgman, G. C. Skelley, D. L. Handlin, J. C. Acton and J. C. McConnell.

"Application of 1973 NRC Nutrient Requirements of Horses," L. D. Hudson (Asst Prof).

"Control of Parturition in Sows," D. L. Handlin, D. M. Henricks (Assoc Prof), and J. C. Eargle (Ag Sci Assoc).

"Steer Response to Corn Silage or Grass Pellets," R. L. Edwards (Assoc Prof) and G. C. Skelley.

## CIVIL ENGINEERING

Subhash C. Anand (Assoc Prof) has been invited by the National Science Foundation to serve as one of the panelists to evaluate proposals submitted to the Division of Higher Education in Science for Faculty Research Participation Programs. The panel met in Washington, D.C., Mar. 14-16.



MINUTES OF THE HONORS COUNCIL MEETING, OCT. 23, 1973

Present: C. Sawyer, P. B. Burt, J. D. Maxwell, P. Wannamaker, J. H. Adair, A. Phillips, W. C. Whitten, M. W. Dixon, C. Kelley, E. J. Graef, K. N. Vickery, D. H. Van Lear.

Dr. Van Lear was elected secretary of the committee.

Dr. Sawyer initiated discussion on the matter of recognition of outstanding academic achievement by students. In the past, students at Clemson have been placed on an "Honors Students" list for making a GPR of 3.0 or better, while at most other universities, such recognition is called the Dean's List. Professor Adair moved that Clemson's "Honor Students" list be changed to Dean's list. The motion passed unanimously.

Clemson University will be represented at a Regional Honors Council meeting at William and Mary by Dr. Sawyer during the latter part of this week.

Student registration in Honors Courses was discussed. A GPR of 3.0 is required for student entry into such courses, although in some cases students with GPR's slightly below 3.0 may be allowed. In one course, Fr H201, both regular majors and honor students were said to be receiving honors credit. Dr. Wannamaker said she would check on this matter.

The meeting was adjourned at 4:30 p.m.

David H. Van Lear, Secretary

COLLEGE OF ENGINEERING

B. E. Gilliland (Asst to the Dean) has been named by Governor John C. West to the State of South Carolina Nuclear Advisory Council. The Nuclear Advisory Council is responsible to and reports to the Governor and the General Assembly. The Council represents the interest of the people of the State of South Carolina by sharing and promoting a safe nuclear environment by generally maintaining cognizance of activities related to the generation of electric power by nuclear means and the related industrial activities and by advising the Governor, the General Assembly, the State agencies concerned with such activities, and members of the public of pertinent actions by the United States Atomic Commission, other federal agencies, or by utilities or industrial concerns involved in such activities.

MINUTES OF THE SCHOLARSHIPS AND AWARDS MEETING, JANUARY 15, 1974

The Scholarships and Awards Committee met at 3:30 p.m. in Room E-103 Martin Hall with Chairman Corinne Sawyer presiding. Committee members absent were: H. E. Morgan and J. S. Pratt; J. T. Lazar attended for T. V. Wilson.

The first order of business was the approval of the previous meeting's minutes as circulated; they were so approved.

Dr. Sawyer announced that Feb. 22 would be the deadline for the submission of the names of Honors and Awards recipients to be honored on Honors and Awards Day, April 10.

Dr. Sawyer also announced the following: the acceptance of a Poole Scholarship by Mr. Robert Reynolds; a request by Miss Ellen Graef, a Poole Scholar, for an advance of one half of a year's scholarship funds so that she might attend summer school, her request was placed into the form of a motion, seconded and approved unanimously.

The next item of business concerned bidding by Committee members for Poole Scholarship offerings. Dean Vickery was recognized by Dr. Sawyer; Dean Vickery and Colonel Bloss offered extensive commentary and recommendations concerning potential candidates for the Scholarships. Matters such as SAT totals, predicted GPR's, and letters of recommendation were considered. It was moved, seconded and approved unanimously to bid one of the candidates immediately. It was further moved and seconded unanimously to have the committee members rank highest to lowest the ten candidates of their choice and submit their rankings to Dr. Sawyer who would tally and implement the selections.

Two other items of business concerning Honors and Awards Day were proposed by Dr. Sawyer: 1) each committee member was requested to confer with the Dean of his college in regard to the College's satisfaction with the choice of award recipients, two in most cases, who were invited to attend the President's luncheon on Honors and Awards Day; 2) Dr. Sawyer cited a problem of ambiguity in Honors and Awards day "invitations" sent to recipients' parents and family; the ambiguity of "recognition" as differing from "reception of an award" was resolved by the decision to issue two kinds of notice: one will be an invitation to the parents of recipients of honors or awards, asking them to come to the campus; the second will be the announcement of a student's achieving the Dean's List, and a suggestion that the parents of such a student might like to visit the campus and participate in Honors and Awards Day.

There being no further business, the meeting was adjourned at 4:35 p.m.

Alfred L. Recoulley, Secretary

COLLEGE OF ARCHITECTURE

Robert D. Eflin (Assoc Prof) was selected to serve as a juror for the 1974 Honor Awards Program of the Wisconsin Chapter, American Institute of Architects. The judging took place March 1 in Milwaukee, Wis. Fellow jurors were Edward Sovik, FAIA of Northfield, Minn. and Peter Blake, FAIA, of New York, N.Y.

John Acorn (Assoc Prof) received the First Annual Art in Architecture Award presented by the S. C. Chapter of the American Institute of Architects at their Winter Convention in Myrtle Beach, Feb. 23-24. The award was presented for the "Tree of Life," a wall sculpture in the Beth Israel Synagogue, Greenville.

Robert England (Assoc Prof) was jointly invited by the University of Manitoba and Winnipeg to lecture on French Gothic architecture and Baroque frescoes, Jan. 28-29.

Sam Wang (Assoc Prof) has exhibited two photographs in the First Invitational Photography Exhibition at the Pensacola, Fla., Junior College Art Gallery; and two photoserigraphs in the Photography Directions '74 exhibition at the State University College at New Paltz, New York, Art Gallery, during the month of February.

Robert Hunter (Prof) exhibited fourteen serigraphs at the "Hampton III Gallery" in Greenville and ten serigraphs at "The Gallery," Spartanburg, Feb. 10 - Mar. 10.

Tom Turner (Asst Prof) recently had an article published in Ceramics Monthly documenting his research on Copper Red Vapor Glazes. The copper red vapor glaze is a unique development of Turner's research since he began teaching at Clemson.

The Faculty of the History and Visual Studies Department of the College of Architecture will be displaying their work at Mercer College in Macon, Georgia during the month of March. The faculty includes, John Acorn, Tom Dimond, Bob Hunter, Tom McPeak, Ireland Regnier, Tom Turner and Sam Wang.

Robert Yeargin, President of Yeargin Construction Company in Greenville, gave a lecture on "Ethics of a Construction Manager" and discussed Yeargin's P.R.I.D.E. Program on Feb. 27 in Lee Hall auditorium. The lecture was sponsored by the Student Chapter of Associated General Contractors of America.

ECONOMICS

Russell D. Shannon (Assoc Prof) published "Ducking the Issues," in the February, 1974 issue of The Clemson University Textile Marketing Letter.



## DAIRY SCIENCE

J. F. Dickey (Assoc Prof), J. J. Janzen (Prof), A. B. Bodine (Grad Stu), John L. Hall (Undergrad Stu), and Robert D. Martin (Undergrad Stu) attended the 71st annual meeting of the Southern Association of Agricultural Scientists, Feb. 3-6, Memphis, Tenn. The following papers were presented to the Southern Division of the American Dairy Science Association:

A. B. Bodine and J. J. Janzen, "BOD Kinetics and Critical Nutrient Ratios in Milk Wastes."

J. F. Dickey, D. M. Henricks (Assoc Prof, Food Sci) and Sarah Bierly, "Progesterone Levels and Fertility in Postpartum Holstein Cows."

J. F. Dickey, E. Holliday and A. R. Ellicott (Asst Prof, Animal Sci), "Histochemistry of the Bovine Oviduct During the Cycle."

J. J. Janzen and F. M. Crawford, "Flavor and Acceptability of Milk."

J. F. Dickey and J. R. Hill, Jr. (Prof, Animal Sci) recently published a chapter entitled, "Histochemistry and Electron Microscopy of the Bovine Oviduct," in a book, The Oviduct and Its Functions, Academic Press, New York, 1974.

## ELEMENTARY AND SECONDARY EDUCATION

W. Owens Corder (Assoc Prof) spoke to the Anderson County School District Five principals, teachers, and staff on Feb. 22. Dr. Corder also spoke to the Upper State Council for Exceptional Children on Feb. 26.

Frederick C. Raetsch (Asst Prof) was elected as recording secretary of the South Carolina International Reading Association on Feb. 23 in Columbia.

## ENGLISH

Professor Harold J. Oliver of the University of New South Wales, Sydney, Australia, will lecture on "The English Language in Australia and America" on Wednesday afternoon, April 3, 1974, at 4:00 P.M. in Daniel Auditorium. The lecture is sponsored by the Department of English, and all students, faculty, and members of the community are cordially invited.

Thomas E. Douglass (Assoc Prof) lectured twice in Feb. to the Greenville County teachers on approaches to composition.

Mark S. Steadman (Assoc Prof) published McAfee County last year. This novel now appears in a French translation published by Editions de Seul.



FORESTRY

Carl L. Lane (Assoc Prof) and Wesley Witcher (Prof, Plant Path and Physiol) have an article, "A survey of the nematodes in the soils of the Hobcaw Barony," in Plant Disease Reporter 58:67-70.

HORTICULTURE

M. LeRon Robbins (Assoc Prof, Truck Station) co-authored "Influence of growth regulators on pod set and yield in snapbeans and related crops." HortScience 8:35-36. (1973). Co-authors were J. L. Weigle, A. R. Beck and K. M. Batal of Iowa State University. Dr. Robbins contributed the following articles to Vegetable Crop Management in 1973: "Mulching and transplanting increase early yield of muskmelon." 9(2):7ff. "Herbicidal control of weeds in sweet potato." 9(3):6 ff. "Influence of seed color on yield of snap bean." 9(6):6. Dr. Robbins published the following reviews in 1973: Review of Gardening for Food. Science Books, A Quarterly Review 8:352. (Also in HortScience 8:65.) Review of Organic Farming: Methods and Markets: An Introduction to Ecological Agriculture. Science Books, A Quarterly Review 8:352-353. (Also in HortScience 8:65.)

INDUSTRIAL MANAGEMENT

C. H. Whitehurst, Jr. (Prof and Hd) had an article, "A Case for Faculty Research and Publications," published in the Winter, 1974 issue of the Phi Kappa Phi Journal.

Robert F. Zant (Asst Prof) was the discussant of a paper on "Management Information Systems" at the fourth annual meeting of the Southeast Region of the American Institute for Decision Sciences held in New Orleans, La., Feb. 20-23.

At the request of the Palmetto Section, American Society for Quality Control, a course designed to prepare quality control practitioners for the Certified Quality Engineer Examination is being taught at Greenville TEC on Tuesday nights from Feb. 5 through May 14. Evans A. LaRoche (Prof) and E. Earl Burch (Asst Prof) are the instructors.

INTERDISCIPLINARY STUDIES

Allan M. Weinstein (Asst Prof) is principal investigator on a \$22,500 grant from the National Institute for Dental Research entitled, "D.C. Stimulation of Bone Ingrowth into Porous Al<sub>2</sub>O<sub>3</sub>. The contract began on March 1, 1974 and will continue until Feb. 1977.

## INTERDISCIPLINARY STUDIES (Continued)

David D. Moyle (Asst Prof) received a one-year grant for \$7,500 from the National Institute for Dental Research entitled, "Fracture Toughness of Bone-Prosthetic Material Composite." The grant period is from March 1, 1974 through Feb. 28, 1975.

## LANGUAGES

Gaston J. Fernandez (Assoc Prof of Spanish) presented a lecture on "Auto-confesion de una culpa: el poema 'La Nina de Guatemale' by Jose Marti" at the initiation ceremony of the Chapter of Sigma Delta Pi at Auburn University, Auburn, Ala., Feb. 7.

Professor Fernandez gave a lecture on "Historical background of the poem, 'La Nina de Guatemala' by Jose Marti," to the Graduate Students studying Spanish American Literature at Auburn University on Feb. 8.

## MATHEMATICAL SCIENCES

John Kenelly (Prof and Hd) attended a Chautauqua-type short course which was sponsored by the American Association for the Advancement of Science and National Science Foundation, on Oct. 29-30 and Feb. 21-22 at Stanford University. The course was given by Dr. Thomas E. Kurtz, Director, Kiewit, Computation Center, Dartmouth College.

W. Robert Boland (Assoc Prof) delivered a lecture to mathematics students and faculty of the Medical University of South Carolina, The Citadel, The College of Charleston and Baptist College entitled, "Some deterministic threshold models in the theory of epidemics," on Feb. 20.

## MECHANICAL ENGINEERING

C. S. Rudisill (Assoc Prof) authored a paper entitled "Derivatives of Eigenvalues and Eigenvectors for a General Matrix" which will appear in the April-May, 1974 issue of the American Institute of Aeronautics and Astronautics J.

## PHYSICS AND ASTRONOMY

F. J. Keller (Assoc Prof) and I. Schneider (Naval Research Laboratory, Washington, D.C.) had a paper published in Phys. Stat. Sol. (b) 60, 175 (1973) entitled, "M-Center Singlet to Triplet Excitation in KCl."

## POLITICAL SCIENCE AND SOCIOLOGY

Governor John C. West has designated Jack E. Tuttle (Assoc Prof), Charles W. Dunn (Assoc Prof and Hd) and Martin Slann (Asst Prof) to be his official delegates to the 78th annual meeting of the American Academy of Political and Social Science in Philadelphia on Apr. 5-6. The topic for this meeting is "USA - USSR: Agenda for Communication."

Horace W. Fleming, Jr. (Asst Prof) in association with Harold E. Albert (Assoc Prof), Charles W. Dunn, and Jack E. Tuttle, has completed a consulting report entitled Hilton Head Island Government: Analysis and Alternatives for the Hilton Head Island (S. C.) Community Association, Inc.

Martin Slann has published a book review of Concise Encyclopedia of the Middle East, Mehdi Heravi, ed., in Perspective, Vol. 3, No. 1 (January/February, 1974).

## OFFICE OF PROFESSIONAL DEVELOPMENT

E. S. Olsen (Assoc Prof, Textiles) and Mrs. Oleta Larson, E. I. duPont de Nemours and Co., Inc., Wilmington, Del. will co-chair a short course entitled "Textile Printing," Mar. 18-20. The sessions will be held in Earle Hall Auditorium.

"Financing Pollution Abatement Equipment for Textiles and Other South Carolina Industries" is the title of a one-day seminar to be held in the College of Industrial Management and Textile Science, Mar. 26. Janet Glocker (Instr, Econ) is the chairperson. The program is sponsored by the department of Economics, the Water Resources Research Institute, the South Carolina Textile Manufacturers Association, the South Carolina Department of Health and Environmental Control and the Municipal Association of South Carolina.

In cooperation with the College of Liberal Arts, the College of Industrial Management and Textile Science and the Office of Professional Development will conduct a two-day seminar, "Current Personnel Problems in Textiles and Other Industries," Apr. 9-10. Phillip Wadsworth (Instr, Sociology) is the chairman. The purpose of the program is to acquaint management and supervisory personnel with the application of sociological and psychological research and implications concerning problems of discrimination in industry. The subjects which will be covered are age, sex, and race discrimination.

## RECREATION AND PARK ADMINISTRATION

Jack Stevenson (Assoc Prof) was installed as Chairman of the Southern Region of the American Camping Association at its National Convention in Atlanta on Feb. 23.

TEXTILE DEPARTMENT

E. A. Vaughn (Assoc Prof) presented a paper, "How Our Foreign Customers View U.S. Cotton," at the Cotton Price Forum in Monroe, La., Jan. 15. The forum was sponsored by the Louisiana Cotton Producers Association, Louisiana Farm Bureau Federation, and the Louisiana Cooperative Extension Service.

E. S. Olson (Assoc Prof) presented a lecture, "Dye Structure and Dyeing Behavior," at the ACS meeting which was held at Furman University, March 9.



CALENDAR OF CAMPUS EVENTS

- 15 -- Baseball - Maryland at Clemson, 3 p.m.
- 15-29 -- "Student Traveling Exhibit (S.C. Art Schools Association)." An exhibition of student work from all member colleges of the association. Rudolph Lee Gallery, open to the public 8 a.m. - 4:30 p.m.
- 15 -- Spring Holidays Begin After Last Class.
- 18-20 -- Three-day seminar of textile printing, co-sponsored by the College of Industrial Management and Textile Science and the Office of Professional Development, Earle Hall.
- 25 -- Classes Resume.
- 25 -- Clemson University vs. Wellington University (Wellington, New Zealand), in a public debate. Topic - "Resolved: That the People Get the Politicians They Deserve." Co-sponsored by the Calhoun Forensic Society and the Speech Communication Association's Committee on Discussion and Debate. Daniel Hall Auditorium, 7:30 p.m., open to the public, admission free.
- 25-27 -- Professor Rouraldo Glurgola, AIA, former chairman of the School of Architecture Columbia University, and partner in the firm of Mitchell, Glurgola Associates Architects, New York and Philadelphia, will visit the school as a design critic and deliver one evening lecture, Lee Hall Gallery Auditorium.
- 26 -- "Evening of Southern Music" featuring local folk musicians, sponsored by the College of Liberal Arts. Daniel Hall Auditorium, 7:30 p.m., admission free, open to the public.
- 26 -- Continuing Education Classes.
- 29 -- Pollution Control Seminar - "Manpower Considerations in Water Quality Control Programs," Joseph Bahnick of the Environmental Protection Agency, sponsored by the Department of Environmental Systems Engineering. Earle Hall, 4 p.m., open to the public.
- 29 -- University Club Social Hour, 5-7 p.m., main floor lounge Clemson House. Open to Clemson faculty and staff, \$2 per person.
- 30 -- Baseball - North Carolina at Clemson, 3 p.m.
- 30 -- Tennis - Wake Forest at Clemson, 2 p.m.
- 31 -- Baseball - Duke at Clemson, 3 p.m.
- 31 -- Tennis - Harvard at Clemson, 2 p.m.

### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13

No. 15 CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM April 1, 1974

APR 1 1974

## Total Private Support For Education Exceeds \$1.6 Million in 1973

Total private support for education through Clemson University's Development Programs was \$1,620,244 in 1973, an 18 per cent increase over the 1972 total of \$1,374,404.

Especially significant in 1973 was the tenfold increase in gifts to our Deferred Giving Program," said Nicholas. "Last year, \$1,514,305 were irrevocably committed to benefit Clemson at some future date through this program." Total deferred gifts received are in addition to the \$1.6-million in private support.

This marks the second year that Clemson's Development Program has been ahead of its schedule. A Ten-Year Plan begun in 1972 calls for private support for education to reach an annual giving level of \$2.3 million by 1982 for total of \$17,139,000. The 1973 gifts received exceeded the plan's 1973 goal of \$1,492,000 by 8.6 per cent.

"We are deeply grateful to those who contribute to Clemson's educational progress," said Vice President for Development Stanley G. Nicholas. "We are particularly thankful to the loyal and dedicated graduates of Clemson who have again made the greatest contribution to this achievement. Our alumni are responsible for contributing \$1,073,661 or 66 per cent of our \$1.6 million total."

Pleased as he is with the trend toward increased private giving, Nicholas feels the success story goes beyond the financial report itself. He said progress in 1973 can be measured by several factors, including the upward surge in deferred gifts and the broadening participation in all of Clemson's Development Programs.

## Faculty and Staff (non-alumni)

Support for Clemson's educational mission from those who are a part of it is a valued possession. In 1973 this assistance increased 76 per cent to \$2,788, while the number of non-alumni faculty and staff participants more than doubled.

## Business and Industry

Gifts from business and industry (excluding corporate matching gifts) totaled \$88,954, an increase of 14 per cent. Participation almost doubled, jumping from 38 donors in 1972 to 72 donors in 1973.

Two exciting programs attracting industry support are the Industrial Associates Program sponsored by the College of Engineering and the Color Science Center Associates Program sponsored by the College of Industrial Management and Textile Science. Both serve a dual purpose -- financial assistance for a Clemson educational program and a beneficial relationship for an industry whose activities are related to current research and studies underway at Clemson.

Most gifts from business and industry are restricted to meet a specific need of a department or college or to increase student aid.

## Foundations

Gifts from foundations increased by 56 per cent to a total of \$181,521 in 1973. Both the Belle W. Baruch Foundation and the J.E. Sirrine Textile Foundation provided continuing support in excess of \$50,000 each.

Among the newcomers to the foundations category are the Humble Companies Foundation which provided student aid for the College of Engineering and the College of Industrial Management and Textile Science; the Bibb Foundation, student aid in Textile Science; and the Maxcy Foundation, student aid in Agricultural Sciences.



The Wilbur Smith Foundation established the Phillip Brooks Award in Civil Engineering. The Sandoz Foundation funded an investigation into an accelerated program for Textile Chemistry students.

#### Friends

Friends of Clemson, often members of the family of a Clemson graduate or faculty member, are also a valued source of support. Gifts from these friends during 1973 totaled \$42,514, most of it restricted for student aid. With their help, memorial scholarships, such as those established in 1973 honoring Joe B. Douthit and Jack Reeves, can be endowed.

A gift from Mr. and Mrs. G. Cameron Todd established the James F. Byrnes Memorial Government Award.

#### Professional and Trade Associations

Gifts from professional and trade associations totaled \$28,970 in 1973 which represents an increase of 88 per cent over last year's figure. Nearly all of these gifts are restricted to meet specific needs of departments or colleges.

For example, a number of associations with related interests help support research in Ceramic Engineering. Other association gifts help sponsor the College of Engineering's "Interactive Computing Program for High School Students" during the summer.

A gift of \$6,000 from the Western Carolina Section of the Instrument Society of America will establish an Engineering Career Development Program for high school students and guidance counselors.

A gift of \$2,000 from the Farm Credit Banks of Columbia is providing four scholarships in Agricultural Sciences, while a gift of \$300 from the Educational Exhibitors Association is providing a scholarship in Industrial Education.

Gifts-in-Kind-- mainly equipment and materials-- valued at \$161,818 were received in 1973. This total represents a significant increase in this type of gift. The number of gift-in-kind donors is rising each year.

The largest equipment gift -- pyrographic analyzers for use in Environmental Systems Engineering from Southeast Research Laboratories -- is valued at \$85,000.

Burlington Industries gave Clemson textile machinery valued at \$38,000.

Other gifts ranged from a 16mm camera, valued at approximately \$4,000 from R.H. Smith for use by the Communications Center, to a heart valve, valued at \$300 from Dr. Christian Barnard for use in Clemson's Bioengineering program.

#### Bequests and Trusts

During 1973 \$15,042.27 was received for support of educational programs through bequests and trusts.

One of the most significant of these gifts was made by the late Mrs. Polly H. Lowry who named Clemson University the beneficiary of a life insurance policy. The gift of \$5,649 is to be used by the Civil Engineering Department.

#### Student Alumni Council Officers Elected

Phyllis Corker has been elected President of the 30-member Student Alumni Council (SAC), a service organization designed to bring Clemson students and alumni of the University closer together. Other officers for the 1974 year include Vice President Rhett Atkins, Secretary Buddy Parton and Public Relations Director Pam Lester.

Student representatives to the SAC come from the same geographical districts as the National Clemson Alumni Association, plus the six major University service organizations. They act as a channel of student opinion for the campus student to the Alumni National Council, the governing body of the Clemson Alumni Association, that meets regularly at the Alumni Center.

"The Alumni Association provides financial assistance to many student activities including homecoming, and helps fund a number of student organizations," says Miss Corker. "It's chief thrust, however, is in the area



of academic enrichment for the Clemson student through the R.F. Poole Alumni Undergraduate Scholarships and the Alumni Teaching Professorships, for example. The goal of SAC is to make Clemson students aware of these types of programs that benefit students while they are students, and at the same time draw undergraduate interest and involvement in the Clemson Alumni Association."

SAC, now just over a year old, successfully completed a summer job referral service for students during the summer of 1973. Over 100 students were placed in jobs with companies in areas where they desired summer work. Miss Corker has announced that SAC will renew this summer job referral service again this summer.

Other service projects of the SAC include distribution of telephone wall cards to each dormitory room in the fall, the selection of an Alumni Master Teacher to be recognized for outstanding classroom teaching at the 1974 Commencement Exercises, and an alumni publication service for organizations on campus whose total alumni number larger than 200. Future plans of the SAC include an information package for those students recuperating in Redfern Health Center.

**R.D. Steer Honored  
By S.C. Dairymen**

Richard Dudley Steer of Greenwood County has been named to Clemson's Dairy Hall of Fame for his outstanding contributions to South Carolina's dairy industry.

Steer retired in 1970 after a 42-year career in the Clemson Extension Service. He had served as Extension Marketing Specialist prior to retirement.

The award was presented at the annual South Carolina Dairy Association Convention at Myrtle Beach on behalf of the association and the South Carolina Council of Milk Producers League.

The plaque honoring Steer will hang with his portrait in the Dairy Hall of Fame in the Plant and Animal Science Building at Clemson.

Total Enrollment by Courses and Academic Classification  
Clemson University  
Second Semester, 1973-74

Major Course	Freshman (Semester)		Sophomore (Semester)		Junior (Semester)		Senior (Semester)		Five-Year (Semester)		Post Grad		Mast	PhD	Uncl	Total
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
Agriculture (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agricultural Economics	4	2	0	0	11	1	7	6	0	0	0	0	13	10	0	60
Agricultural Engineering	10	4	5	1	0	4	3	3	0	0	0	0	4	5	0	39
Agric. Mech. and Business	0	4	3	3	4	0	0	0	0	0	0	0	5	0	0	19
Agronomy	2	4	5	6	2	4	3	10	0	0	0	0	5	1	0	42
Animal Industries	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Animal Physiology	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9
Animal Science	12	5	6	10	12	13	11	12	0	0	0	0	10	0	0	91
Dairy Science	1	1	3	3	1	6	3	0	0	0	0	0	2	1	0	21
Economic Biology	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Economic Zoology	3	0	1	1	1	1	0	0	0	0	0	0	0	0	0	7
Entomology	1	0	1	1	5	3	2	1	0	0	0	0	16	8	0	38
Food Science	4	4	3	5	4	0	1	4	0	0	0	0	0	0	0	25
Horticulture	11	11	10	9	16	3	6	9	0	0	0	0	15	0	0	91
Nutrition	0	0	0	0	0	0	0	0	0	0	0	0	14	4	0	18
Plant Pathology	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4
Plant Physiology	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11
Plant Science	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
Poultry Science	2	0	0	1	0	2	0	2	0	0	0	0	3	0	0	10
Pre-Veterinary	34	22	11	19	7	4	1	1	0	1	0	0	0	0	0	99
Wildlife Biology	0	0	0	0	0	0	0	0	0	0	1	1	14	0	0	15
College Total	85	57	49	66	63	41	37	48	0	0	3	109	51	0	0	609
Architecture (Non-Degree)	0	0	0	0	0	0	0	0	0	0	1	9	0	0	0	10
Architecture	0	0	0	0	0	0	0	1	0	0	1	34	0	0	0	36
Building Construction	7	5	13	16	20	25	11	23	0	0	0	0	0	0	0	121
City and Regional Planning	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	24
Pre-Architecture (BA)	21	15	19	32	19	22	13	37	0	0	3	0	0	0	0	181
Pre-Architecture	37	36	12	24	15	7	2	1	0	0	1	0	0	0	0	135
Visual Studies	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6
College Total	66	56	44	72	54	54	26	62	0	0	7	72	0	0	0	513

Total Enrollment by Courses and Academic Classification  
Clemson University  
Second Semester, 1973-74

Page two

Major Course	Freshman (Semester)		Sophomore (Semester)		Junior (Semester)		Senior (Semester)		Five-Year (Semester)		Post Grad		Mast	PhD	Uncl	Total
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd				
Education (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	0	171	0	0	171
Education	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administration and Supervision	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	60
Agricultural Education	5	4	3	6	8	10	2	6	0	0	0	0	12	0	0	56
Early Childhood Education	41	13	21	34	23	31	10	29	0	0	0	0	0	0	0	202
Elementary Education	74	47	32	80	39	63	23	57	0	0	0	0	125	0	0	542
Industrial Education	12	9	15	19	22	15	13	23	0	0	0	0	22	0	0	150
Personnel Services	0	0	0	0	0	0	0	0	0	0	0	0	123	0	0	123
Reading	0	0	0	0	0	0	0	0	0	0	0	0	65	0	0	65
Science Teaching	8	4	5	7	3	13	4	15	0	0	0	0	1	0	0	60
Secondary Education	37	32	30	55	44	59	23	67	0	0	0	0	52	0	0	405
College Total	177	109	106	201	139	191	75	197	0	0	8	6	631	0	0	1834
Engineering (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Engineering	10	1	2	3	0	0	0	0	0	0	0	0	0	0	0	16
Dio-Engineering	0	0	0	0	0	0	0	0	0	0	0	0	14	4	0	18
Ceramic Engineering	5	4	6	10	6	9	3	8	0	0	0	0	9	0	0	60
Chemical Engineering	20	20	8	24	6	27	4	24	0	0	0	0	11	10	0	154
Civil Engineering	43	20	24	26	12	32	14	36	0	0	0	0	14	5	0	226
Electrical Engineering	47	40	22	39	29	42	11	43	0	0	0	0	16	7	0	296
Engineering Analysis	4	3	2	2	4	4	3	6	0	0	1	0	0	2	0	29
Engineering Mechanics	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
Engineering Technology	6	5	6	7	11	15	3	10	0	0	0	0	0	0	0	63
Environmental Systems Engr.	0	0	0	0	0	0	0	0	0	0	0	0	21	7	0	28
Materials Engineering	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
Mechanical Engineering	31	14	14	20	13	21	15	30	0	0	0	0	18	4	0	180
Systems Engineering	0	0	0	0	0	0	0	0	0	0	0	0	4	5	0	9
Water Resources Engineering	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12
College Total	166	107	84	131	81	150	53	157	0	0	1	1	123	45	0	1098
For. & Rec. Res. (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest Management	41	23	24	34	14	19	18	26	0	0	0	0	7	0	1	207
Recreation and Park Adm.	72	38	54	60	61	47	40	59	0	0	1	0	25	0	0	457
Wood Utilization	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
College Total	115	61	78	94	75	66	58	85	0	0	1	0	32	0	1	666

Total Enrollment by Courses and Academic Classification  
Clemson University  
Second Semester, 1973-74  
Page three

Major Course	Freshman (Semester)		Sophomore (Semester)		Junior (Semester)		Senior (Semester)		Five-Year (Semester)		Post Grad	Mast	PhD	Uncl	Total
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd					
I M and T S (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Accounting	30	10	15	25	14	21	9	21	0	0	1	0	0	0	146
Administrative Management	105	90	88	86	110	55	60	58	0	0	0	0	0	0	652
Economics	8	2	4	6	9	6	7	14	0	0	0	7	0	0	63
Engineering Management	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20
Financial Management	37	20	37	24	24	26	11	26	0	0	0	0	0	0	205
Industrial Management	12	6	9	15	10	8	15	47	0	0	0	0	0	0	122
Management	0	0	0	0	0	0	0	0	0	0	0	15	1	0	16
Management Science	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7
Textile & Polymer Science	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
Textile Chemistry	4	4	3	4	0	2	1	6	0	0	0	9	0	0	33
Textile Science	1	2	0	1	0	3	0	5	0	0	0	12	0	0	24
Textile Technology	9	3	4	6	2	2	3	0	0	0	0	0	0	0	29
College Total	206	137	160	167	169	123	106	177	0	0	1	44	34	0	1324
Liberal Arts (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Liberal Arts	24	15	2	4	0	2	0	0	0	0	1	0	0	0	48
English	27	33	21	23	15	27	14	18	0	0	2	48	0	0	228
French	5	3	2	2	5	3	1	1	0	0	0	0	0	0	22
German	0	1	1	0	0	0	0	2	0	0	0	0	0	0	4
History	16	16	13	17	6	17	7	12	0	0	2	8	0	0	114
Political Science	40	42	21	37	21	23	26	24	0	0	0	0	0	0	234
Psychology	41	52	23	48	39	44	25	39	0	0	1	0	0	0	312
Sociology	12	16	14	14	12	6	14	9	0	0	0	0	0	0	97
Spanish	4	2	2	8	3	3	3	2	0	0	0	0	0	0	27
College Total	169	180	99	153	101	125	90	107	0	0	6	57	0	0	1087
Nursing (Non-Degree)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nursing (AA)	11	12	15	21	14	3	0	0	0	0	1	0	0	0	77
Nursing	84	24	47	50	9	53	5	28	0	0	0	0	0	0	300
College Total	95	36	62	71	23	56	5	28	0	0	1	0	0	0	377



Total Enrollment by Courses and Academic Classification  
 Clemson University  
 Second Semester, 1973-74  
 Page Four

Major Course	Freshman (Semester) 1st	Freshman (Semester) 2nd	Sophomore (Semester) 1st	Sophomore (Semester) 2nd	Junior (Semester) 1st	Junior (Semester) 2nd	Senior (Semester) 1st	Senior (Semester) 2nd	Five-Year (Semester) 1st	Five-Year (Semester) 2nd	Post Grad	Master	PhD	Uncl	Total
Phys., Math & Bio Scs. (Non-Deg)	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6
Biochemistry	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12
Biology	5	1	0	0	0	0	0	0	0	0	0	0	0	0	9
Botany	4	4	3	5	3	0	1	4	0	0	0	12	0	0	36
Chemical Physics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemistry (BA)	0	2	4	1	2	3	1	5	0	0	0	0	0	0	18
Chemistry	8	10	7	8	6	6	3	3	0	0	1	0	0	0	85
Geology (BA)	1	0	0	1	0	2	2	0	0	0	0	0	0	0	6
Geology	5	1	4	1	1	5	1	3	0	0	0	0	0	0	21
Mathematics (BA)	14	4	2	4	2	6	3	9	0	0	0	0	0	0	44
Mathematics	22	20	13	17	9	15	9	29	0	0	0	51	21	0	206
Medical Technology	17	21	10	18	4	15	5	0	0	0	0	0	0	0	90
Microbiology	26	29	16	27	20	23	9	19	0	0	0	21	0	0	190
Physics (BA)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Physics	7	5	1	5	0	6	2	9	0	0	0	10	21	0	66
Pre-Dentistry	1	0	6	10	1	4	4	12	0	0	0	0	0	0	41
Pre-Medicine	0	4	14	25	14	6	2	22	0	0	1	0	0	0	88
Pre-Medicine Core	68	48	0	0	1	0	0	0	0	0	0	0	0	0	117
Pre-Pharmacy	10	18	6	11	2	0	0	0	0	0	1	0	0	0	48
Zoology	50	20	34	30	21	40	19	37	0	0	2	28	9	0	290
College Total	238	187	120	166	87	131	61	152	0	0	8	150	74	0	1374
Non-Degree	0	0	0	0	0	0	0	0	0	0	15	0	0	18	33
Sub-Total	0	0	0	0	0	0	0	0	0	0	15	0	0	18	33
CAMPUS TOTAL	1317	930	802	1121	792	937	511	1013	0	0	51	1218	204	19	8915

Enrollment by Men and Women - Full Time and Part Time  
Clemson University  
Second Semester 1973-74

Classification	Full Time	<u>MEN</u>		Full Time	<u>WOMEN</u>		Full Time	<u>TOTAL</u>	
		Part Time	Total		Part Time	Total		Part Time	Total
1st Semester Freshman	821	22	843	455	19	474	1276	41	1317
2nd Semester Freshman	572	14	586	330	14	344	902	28	930
Sub-Total	1393	36	1429	785	33	818	2178	69	2247
1st Semester Sophomore	521	18	539	247	16	263	768	34	802
2nd Semester Sophomore	674	18	692	408	21	429	1082	39	1121
Sub-Total	1195	36	1231	655	37	692	1850	73	1923
1st Semester Junior	556	19	575	205	12	217	761	31	792
2nd Semester Junior	589	13	602	328	7	335	917	20	937
Sub-Total	1145	32	1177	533	19	552	1678	51	1729
1st Semester Senior	372	16	388	116	7	123	488	23	511
2nd Semester Senior	677	78	755	239	19	258	916	97	1013
Sub-Total	1049	94	1143	355	26	381	1404	120	1524
1st Semester Five-Year	0	0	0	0	0	0	0	0	0
2nd Semester Five-Year	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	0	0	0	0	0	0	0
TOTAL	4782	198	4980	2328	115	2443	7110	313	7423
Graduate-Masters Level	377	290	667	121	430	551	498	720	1218
Postgraduate	21	18	39	3	9	12	24	27	51
Non-Degree	3	7	10	1	8	9	4	15	19
Graduate-Ph.D. Level	153	35	188	12	4	16	165	39	204
TOTAL	554	350	904	137	451	588	691	801	1492
CAMPUS TOTAL	5336	548	5884	2465	566	3031	7801	1114	8915
Clemson-Furman MBA	9	117	126	0	3	3	9	120	129
Institutes	0	199	199	0	522	522	0	721	721
UNIVERSITY TOTAL	5345	864	6209	2465	1091	3556	7810	1955	9765

Minutes of the meeting of  
THE ADMINISTRATION-FACULTY-STUDENT COUNCIL  
CLEMSON UNIVERSITY  
Tuesday, February 5, 1974

Chairman David Rowe called the regular meeting of the AFSC to order at 3:35 p.m., in Sikes Hall Board Room.

All members of the Council were present except William E. Findley.

ACTION:            There being no corrections, the minutes of the meeting of December 4, 1973 stood approved as distributed.

The Council discussed the current status of various resolutions, proposals, etc., including a class attendance proposal now being studied by the Undergraduate Council, the honor system proposals advanced by the Student and Faculty Senates and energy conservation recommendations.

The next meeting of the Council was set for 3:30 p.m., March 5. There being no further business the Council adjourned at 4:30 p.m.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MARCH 4, 1974

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Joseph B. McDevitt, Walter T. Cox, Luther P. Anderson, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, K. N. Vickery, Henry E. Vogel, James L. Edwards, S. M. Willis, and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of January 7, 1974 were approved as submitted.

2. University-wide Language Policy

The Dean of the University recommended the following university-wide language policy:

The university-wide language requirement for doctoral degrees shall be discontinued. The language requirements for each doctoral degree will be established by the department administering the degree, and approved by the Dean of the College responsible for the degree program. If a doctoral degree program includes a language requirement, the details of the requirement and the procedures for satisfying the requirement will conform to the University policies established by the Graduate Council. The language requirement for each degree program will remain as presently defined unless revised requirements approved by the appropriate department head(s) and academic dean(s) are recorded with the Dean of Graduate Studies and University Research.

Action: Approved.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MARCH 4, 1974 (Continued)

3. Master of Architecture Degree

The Dean of the University recommended the following options in awarding the Master of Architecture Degree:

(A) Master of Architecture Degree (4-2 program):

- Option 1. 45 hours of study in the student's prescribed curriculum with an overall GPR of 3.0 in graduate course work, plus satisfactory completion of an architectural thesis of 15 hours while in residence as a full-time student.
- Option 2. A minimum of 60 hours of study in the student's prescribed curriculum with an overall minimum GPR of 3.0 in graduate course work, including a terminal project of variable credit.

It should be noted that the terminal project, Arch 859, cannot be commenced until the student has attained a 3.0 GPR.

(B) Master of Architecture Degree (5-1 program):

- Thesis Option: 1. Attainment of the Bachelor of Architecture degree from an accredited program in architecture.
- 2. A minimum of 27 hours of course work in the student's prescribed curriculum with an overall minimum GPR of 3.0 in graduate course work excluding thesis.
- 3. Satisfactory completion of a 9-credit-hour architectural thesis while in residence as a full-time student.

- Non-Thesis Option: 1. A minimum of 36 hours of course work in the student's prescribed curriculum with an overall minimum GPR of 3.0 in graduate course work including a terminal project of variable credit.

In the Thesis Option, the architectural thesis will be identified as Arch 891, Thesis. 3-9 hours of accumulative credit.

In the Non-Thesis Option, no student may schedule more than 9 credit hours of Arch 859, Terminal Project, 3-15 hours of variable credit.

Action: Approved.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MARCH 4, 1974 (Continue

4. Curriculum Changes

Statement and Recommendation: The Dean of the University recommended additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

I. COLLEGE OF AGRICULTURAL SCIENCES

A. New Undergraduate Course:

FdSc 425      Nutrition and Dietetics, 3 cr. (3 and 0)

B. New Graduate Courses:

EnSci 631      Public Health Administration, 3 cr. (3 and 0)

FdSc 625      Nutrition and Dietetics, 3 cr. (3 and 0)

C. Graduate Course Credit Change:

Agron 806      Special Problems, 1-3 cr. (0 and 3-9)

II. COLLEGE OF EDUCATION

A. New Undergraduate Course:

InEd 313      Arts and Crafts, 3 cr. (1 and 6)

B. Undergraduate Course Changes in Credit, Title and/or Description:

AgEd 201      Introduction to Agricultural Education, 3 cr. (2 and 3)

InEd 312      Metal Processes, 3 cr. (2 and 3)  
(Change in title, course description and credit hours.)

C. New Graduate Courses:

AgEd 889      Introduction to Research in Education, 3 cr. (3 and 0)  
(Replaces AgEd 891)

Educ 853      Administration and Supervision of Special Education,  
3 cr. (3 and 0)

III. COLLEGE OF ENGINEERING

A. New Undergraduate Course:

ChE 454      Physiological Control Systems, 3 cr. (3 and 0)

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MARCH 4, 1974 (Continued)

IV. COLLEGE OF LIBERAL ARTS

A. New Undergraduate Course:

PolSci 425    The Governmental Budgetary Process, 3 cr. (3 and 0)

B. New Graduate Courses:

PolSci 626    Government Organization Theory, 3 cr. (3 and 0)

PolSci 628    American Defense Policy Analysis, 3 cr. (3 and 0)

V. COLLEGE OF PHYSICAL, MATHEMATICAL & BIOLOGICAL SCIENCES

A. Undergraduate Course Changes:

Zool 110    Integrated Basic Science as Related to Man I, 4 cr. (3 and 3)  
(Change in lab hours from 2 to 3/week.)

Zool 111    Integrated Basic Science as Related to Man II, 4 cr. (3 and 3)

Zool 460    General Physiology, 4 cr. (3 and 3)

B. Graduate Course Changes:

Math 813    Advanced Mathematical Programming, 3 cr. (3 and 0)  
(Change in title and slight modification in content.)

Zool 660    General Physiology, 4 cr. (3 and 3)  
(Change in credit hours only.)

C. New Graduate Courses:

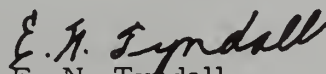
Math 817    Stochastic Models in Operations Research I, 3 cr. (3 and 0)

Math 818    Stochastic Models in Operations Research II, 3 cr. (3 and 0)

Zool 810    Behavioral Ecology, 3 cr. (3 and 0)

Zool 815    Physiological Ecology, 4 cr. (3 and 3)

Action: Approved

  
E. N. Tyndall  
Secretary

MINUTES OF THE UNDERGRADUATE COUNCIL, MARCH 1, 1974

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Arline Duvall, C. Clifford Fain, Jerome V. Reel, David Rowe (Student Representative), Malcolm J. Skove, Rodney Sprott (Student Representative), Edward A. Vaughn, Kenneth N. Vickery, and Spurgeon Cole (Visitor).

The minutes of the February 1, 1974, meeting were approved as distributed.

Dean Green announced that there would be a special meeting of the Council on Friday, March 15, at 3:00 p.m.

A discussion of the student evaluation of faculty proposal was introduced by Dean Green's stating that the policy question is whether to continue the present practice of evaluation of faculty or to initiate the use of a computerized form. Following discussion there was a motion that the Council endorse, in principle, the use of a computerized form; that confidentiality for faculty members be assured; that the print-out for the individual faculty member should also include averages for his department, his college, and the University; and that, upon the endorsement of the proposal by the appropriate authorities, the Undergraduate Council should proceed with the development of an evaluation form.

There was a second to the motion; the motion was approved.

College of Industrial Management and Textile Science

The following course was approved pending clarification of prerequisites:

Econ 408 Arbitration, 3 cr (3 and 0).

The following courses were tabled:

Econ 420 Economics of Public Expenditures, 3 cr (3 and 0).

Econ 425 Economics of State and Local Government, 3 cr (3 and 0).

Deletion from the catalog was approved for the following course:

Econ 413 International Finance, 3 cr (3 and 0).

College of Physical, Mathematical, and Biological Sciences

The following courses were approved:

Astr 101 Solar System Astronomy, 3 cr (3 and 0).

Astr 102 Stellar Astronomy, 3 cr (3 and 0).



MINUTES OF THE UNDERGRADUATE COUNCIL, MARCH 1, 1974 (Continued)College of Physical, Mathematical, and Biological Sciences (Continued)

Astr	103	Solar System Astronomy Laboratory, 1 cr (0 and 2).
Astr	104	Stellar Astronomy Laboratory, 1 cr (0 and 2).
Bot	432	Plant Geography, 3 cr (2 and 3).
Bot	461	Cytology, 4 cr (3 and 2).
Geol	101	Physical Geology, 4 cr (3 and 2).
Phys	223	Physics Laboratory I, 1 cr (0 and 3).
Phys	224	Physics Laboratory II, 1 cr (0 and 3).
Phys	245	Energy Sources for the Future, 3 cr (3 and 0).

Dean Green stated that he has received copies of reviews of University Undergraduate Programs and that there are no recommendations for deletions of programs at this time.

Reports were distributed for the ad hoc committees on Class Attendance Policy and General Education Requirements. These reports will be discussed at the March 15 meeting of the Council.

OFFICE OF THE DEAN OF UNDERGRADUATE STUDIES

Frank A. Burtner (Prof) has published an article, "The Advisor's Role - Relevant But Restricted," in The Advisor, Association of American Medical Colleges, Vol. 10, No. 1, February 1974.

Frank A. Burtner, Chairman, Southeastern Association of Advisors for the Health Professions, presided at the annual meeting held at the University of Alabama in Birmingham Medical Center, March 8-10 and was reelected Chairman for 1974-1975.

COLLEGE OF NURSING

Arline Duvall (Assoc Prof) participated recently in a Visitors' Conference of the National League for Nursing. The purpose of the conference was to orient and prepare visitors for the National League for Nursing visits for accreditation purposes in the baccalaureate and higher degree programs in nursing.

Mary M. Wagner (Asst Prof) conducted a workshop, "Care of Burn Injured Patient," March 22-23 at the University of Oklahoma and Norman Campus.

MINUTES OF THE MEETING OF THE FACULTY SENATE, FEBRUARY 12, 1974

President Fulton called the meeting to order at 4:18 p.m. He suggested deletion of a sentence on the second page of the Minutes of the January meeting. Professor Jacobus moved that the minutes be approved incorporating the change. The motion passed.

President's Report

President Fulton reported that the Graduate Council at its meeting on Feb. 8 had adopted a new policy regarding language requirements for doctoral degrees. Essentially, the new policy provides that the requirement will be left up to the discretion of the department or departments administering the degree program, subject to the approval of the dean of each college responsible for the degree program. The details of the policies must conform to rules established by the Council and any change in present policies must be recorded with the Dean of Graduate Studies and University Research. In addition, President Fulton said, the new policy would eliminate the "broadening area" option. The proposed policy will be submitted to the Educational Council for consideration.

The meeting of the Planning Council on Jan. 15, President Fulton reported, was devoted to the problems of bicyclists. A plan regarding the use of bicycles on campus devised by student Rodney Sprott was presented to the Council by Professor R. D. Eflin, University Master Planner. The Council recommended that Student Senate Resolution #R-73-83 incorporating Sprott's suggestions be implemented and also that the Office of Development study the needs of bicyclists approaching and leaving the campus. Professor Beckwith suggested that the situation on campus regarding bicyclists needs further study.

President Fulton said that the Senate's Advisory Committee had approved his recommendations for the membership of the Senate's Ad Hoc Committee D to monitor plans for the University's Continuing Education Center. The members are: J. E. Matthews, chairman, V. D. Carmack, J. C. Mullins, and R. D. Shannon.

President Fulton reported that on Jan. 18 he had talked with Dr. J. E. Hair regarding the Redfern Health Center policy of providing written excuses for students. According to President Fulton, Dr. Hair had stated that although the Center is not required to provide written excuses for students who have been outpatients at the Center, they will be provided on request for students who have been inpatients or for students who are told at the Center to go to a hospital or to rest in their dormitory room. Professor Steirer pointed out that currently only the Office of Student Affairs is providing such written excuses.

President Fulton then reported that Dean Hurst had given him for his consideration an amendment prepared by Admiral McDevitt to the Annual Leave Policy for 12-month Faculty. Although he was unable to divulge the details of the amendment, President Fulton said that it likely would be given to the chairman of the Senate's

MINUTES OF THE MEETING OF THE FACULTY SENATE, FEB. 12, 1974 (Continued)

Welfare Committee in time for the matter to be considered by the full Senate at its meeting on Mar. 12. President Fulton stated that he was "enthusiastic" in support of the amendment.

At the meeting of the Undergraduate Council on Feb. 1, President Fulton said, the Senate's RESOLUTION PRESCRIBING GPR FOR GRADUATES IN MAJOR (FS-73-6-2) was approved. However, both the Resolution and an implementing statement formulated by Dean Green and Dean Vickery must still be approved by the Educational Council. In addition, the Undergraduate Council established a subcommittee chaired by Dr. Malcolm J. Skove to consider the University's Class Attendance Policy. It was suggested that the subcommittee report to the Council no later than its April meeting.

Professor Beckwith pointed out that some members of the coaching staff object to the current attendance policy; since many faculty members no longer take attendance, the coaches cannot determine whether or not athletes are attending classes. Professor Steirer also noted that some scholarships now require information about recipients' class attendance. He suggested that all faculty members be provided with a list of such recipients so that their attendance can be checked.

President Fulton reported that according to its constitution, the Senate must have its biennial reapportionment this year. The reallocation of Faculty Senators prepared by President Fulton using information from Dean Hurst provides that the College of Agricultural Sciences will gain one Senate member and the College of Liberal Arts will lose one. There will be no other changes. Election of new senators must take place in March.

President Fulton noted that the Building Committee for the Continuing Education Center is being established with Mr. Jerry Boyer as chairman. President Fulton nominated Professor Shannon as the Senate's representative on the Committee. Professor West moved that the Advisory Committee accept the nomination; the motion passed.

President Fulton also noted that President Edwards, in response to Senate Resolutions, had sent letters expressing appreciation to the donors of funds for the Jordan gift and for the Hunter and Newman endowed chairs which were announced recently at the University.

The status of the process of reviewing academic programs at the University was also described by President Fulton.

Finally, President Fulton noted that the Student Senate had passed resolutions recommending that the street barriers be removed in order that gasoline be conserved and recommending that an honor system be established.



MINUTES OF THE MEETING OF THE FACULTY SENATE, FEB. 12, 1974 (Continued)

Committee Reports

For the Admissions and Scholarships Committee, its chairman, Professor Steirer, stated that Dr. Hair's willingness for Redfern to provide written excuses for students who have been inpatients at the Center, as reported earlier by President Fulton, was contrary to his understanding of the situation. In order to have time to clarify the matter, he did not introduce the Resolution on Medical Excuses which his committee had prepared. Professor Skelton agreed with Professor Steirer that providing such excuses should not be the duty of the Office of Student Affairs. Professor Johnston pointed out that the problem of students who are off campus and require medical attention should be given consideration.

Professor Steirer said that his committee had also considered Professor Beckwith's proposal that the 5 1/2 day week be reinstated in an effort to conserve energy, but he said that the members did not find any strong reasons for adopting the proposal. Finally, he said that his committee will consider the matter of Continuing Education Units.

For the Welfare Committee, its chairman, Professor Dillon, reported on a poll taken among 9-month faculty members to determine whether some change in policy concerning vacation or leave time for that segment of the faculty should be considered. In the poll, Professor Dillon, said, 191 out of 513 9-month faculty members responded, and only 27 of the 191 requested that changes should be considered. In view of that, no change in the policy will be considered. However, in an effort to recognize the desires of those who felt that a change is appropriate, he introduced a RESOLUTION ON INTERPRETATION OF LEAVE POLICY FOR NINE MONTH FACULTY (FS-74-2-1):

WHEREAS it is the opinion of the majority of the nine months faculty that the Annual Leave (Vacation) policy is amply and satisfactorily stated, but

WHEREAS some nine months faculty feel that several Department Heads violate the spirit of the statement,

BE IT RESOLVED that the Dean of the University be asked to issue a statement to the College Deans and Department Heads to the effect that the spirit of the vacation policy implies that (1) the summer interval between sessions, (2) the Christmas interval between semesters and (3) the Spring Holidays are the individual faculty member's vacation time. Therefore, nine months faculty members should not be imposed upon to carry out departmental functions during these periods.



MINUTES OF THE MEETING OF THE FACULTY SENATE, FEB. 12, 1974 (Continued)

President Fulton asked for examples of cases which had brought forth the Resolution. Professor Beckwith mentioned occasions when faculty members are on summer vacation or are involved in research projects yet are requested to return to campus for committee meetings and other duties.

The Resolution passed by unanimous vote.

Professor Dillon then referred to developments regarding the report of the Retirement Subcommittee of the Council of Presidents of South Carolina Public Colleges and Universities. President Fulton suggested that Dr. E. L. McLean, a member of the subcommittee, be invited to the March meeting of the Senate. Professor West moved that the Advisory Committee approve this suggestion. His motion carried.

Professor Dillon then introduced a RESOLUTION: SMOKING BAN IN LITTLEJOHN COLISEUM (FS-74-2-2):

WHEREAS, there is evidence to indicate that inhalation of tobacco smoke can be harmful, and

WHEREAS, exposure to tobacco smoke can be particularly hazardous to people suffering from allergies and lung diseases, and

WHEREAS, non-smokers have a right to assemble in public places without being forced to suffer the discomforts and hazards produced by tobacco smoke,

BE IT RESOLVED that the Faculty Senate request that the University Administration take necessary action to prohibit smoking in the seating area of Littlejohn Coliseum and that smoking be permitted only in the outer lobby.

There was some discussion among the Senators regarding whether or not such a policy could be applied to non-University sponsored functions. An amendment from Professor Bauld to exclude them specifically in the Resolution failed. President Fulton pointed out that the matter would be determined by those who set policies for the Coliseum anyway. Professor West predicted that a State law would be passed prohibiting smoking in such facilities.

The Resolution passed by unanimous vote.

For the Research Committee, its chairman, Professor Bauld, introduced a RESOLUTION ON THE CREATION OF A FACULTY RESEARCH COUNCIL (FS-74-2-3):

MINUTES OF THE MEETING OF THE FACULTY SENATE, FEB. 12, 1974 (Continued)

WHEREAS some mechanism should be available for the conveyance of Faculty advice to the administration concerning the policies, procedures, and regulations that affect the climate within which both sponsored and unsponsored research is conducted at the University, and

WHEREAS quality graduate programs depend significantly upon the climate created for the conduct of research, therefore,

BE IT RESOLVED that the Faculty Research Committee be dissolved and in its place a Faculty Research Council be created so as to reflect high regard for the role which sponsored and unsponsored research projects play in the total educational process, furthermore,

BE IT RESOLVED that the membership of the newly created Faculty Research Council consist of the Dean of Graduate Studies and University Research; one faculty member from each academic college, nominated by the dean of the college in consultation with the faculty of the college, and appointed by the Dean of the University for a term of three years; two students, one undergraduate student nominated by the Student Senate and one graduate student nominated by the Graduate Student Association, each appointed by the Dean of the University for a term of one year, and one ex-officio non-voting member from the Office of Business and Finance. The Dean of Graduate Studies and University Research will serve as chairman and the Assistant Dean of University Research will act as secretary and ex-officio non-voting member, and furthermore,

BE IT RESOLVED that the responsibilities of the newly created Faculty Research Council shall include: advising the administration on all policies, procedures, and regulations affecting sponsored and unsponsored research on the campus; encouraging the Administration in the vigorous solicitation of financial support for University research activities; assuring the general maintenance of an atmosphere of respect for research activities as an essential part of the total educational process; and concerning itself with all other matters of faculty concern related to research.

Professor Dillon said that there was some concern that this Council might represent a backward step toward the schism which once existed between teaching and research faculty. Professor Bauld responded that it would simply provide a forum for research interests such as that provided by the Graduate and Undergraduate Councils for the academic interests of those areas, and the Extension Council for interests of the extension area. Professor Cross inquired whether the new Council would facilitate the acquisition of funds. Professor Bauld stated that this feature was embodied within the total thrust of the Resolution. Professor Jacobus pointed out that the Office of University Research needed less fragmented input from the research faculty to guide it in its activities.

MINUTES OF THE MEETING OF THE FACULTY SENATE, FEB. 12, 1974 (Continued)

The Resolution passed by unanimous vote.

For the Advisory Committee for the Student Relations Committee, Professor Dillon noted that the committee had completed its work. A list of changes in the Student Relations Committee's rules and procedures had previously been sent to the Senators, and they already have been adopted by the Committee. They include a revision of the Preamble, an additional rule requiring that students take complaints to the faculty member involved prior to contacting the Student Relations Committee, a new rule regarding Class Action Grievances, and a new rule providing for changes in the rules and procedures by unanimous vote of all Committee members. The revisions in the rules and procedures are appended to these minutes.

For Ad Hoc Committee C on Faculty Evaluation of Academic Administrators, its chairman, Professor West, stated that the committee members had given some attention to the limited efforts in this area done elsewhere. He also said that the committee probably would have a tentative plan to submit at the March meeting of the Senate.

Professor Shannon, the Senate's representative on the Continuing Education Center Planning Committee, reported that a subcommittee of that committee had presented its listing of the "essential ingredients" for the Center to the full committee late in January. The list included not only a description of desired meeting rooms and auditoriums but also details regarding hotel rooms and eating facilities. The full committee had adopted the subcommittee report and sent it to President Edwards. Now, in addition to setting up a Building Committee, the Administration is taking the necessary steps toward commissioning an architectural firm. Professor Shannon pointed out that although a specific location for the Center had not been established, it is widely presumed that it will be constructed across Palmetto Boulevard from the Cooper Library.

Professor Beckwith claimed that the facilities mentioned seemed to duplicate facilities already provided elsewhere on the campus and pointed out that the committee seemed not to have taken account of some essential needs of the University. Professor Carpenter noted that there are two prevailing philosophies regarding continuing education facilities: (1) to disperse the facilities about a campus or (2) to consolidate them in one building. Professor Shannon stated that it was his understanding that the University did not have the prerogative of selecting the first option.

Professor Cross, the Senate's representative on the University Traffic and Parking Committee, stated that at its recent meeting it was noted that faculty members needing both "E" and "W" parking stickers can obtain them. He also reported that the committee likely will establish new rules and regulations regarding bicycles. Professor West noted that there seems to be a serious



MINUTES OF THE MEETING OF THE FACULTY SENATE, FEB. 12, 1974 (Continued)

problem of inadequate parking facilities in the area of Tillman and Godfrey Halls due to the fact that students don't seem to mind paying fines. President Fulton requested the Policy Committee to investigate the matter of fines.

New Business

Professor Jacobus introduced a COMMITTEE CONSOLIDATION RESOLUTION (FS-74-2-4):

WHEREAS the role and function of the Clemson University Poisonous Chemicals and Radioactive Materials Committee has not been differentiated from that of the University Safety and Fire Prevention Committee, and

WHEREAS the current need for an independent committee to deal specifically with poisonous chemicals and radioactive materials in terms of safety within the University cannot be justified, therefore,

BE IT RESOLVED that the Clemson University Poisonous Chemicals and Radioactive Materials Committee be dissolved, and

BE IT FURTHER RESOLVED that the role and functions of the Poisonous Chemicals and Radioactive Materials Committee be incorporated within the University Safety and Fire Prevention Committee, with no increase in the present membership of this latter committee.

The Resolution passed by unanimous vote.

Finally, President Fulton noted that in President Nixon's proposed budget for fiscal year 1975 overall spending for education and for research is up. He also stated that he would report at the March meeting on the status of all Resolutions of the 1973-1974 Faculty Senate.

There being no further business, the Senate adjourned at 6:22 p.m.

Russell D. Shannon, Secretary

Members absent: D. O. Ezell, F. H. Hedden, W. Baron, C. W. Roberts, M. A. Kelly, M. D. Sherrill, P. T. Holmes, A. S. Tombes.



RULES AND PROCEDURES OF THE STUDENT RELATIONS COMMITTEE

Replacement to Last Paragraph in Preamble on Page 149

The procedures of the Committee are not designed to substitute for formal, judicial procedures, but to serve as an informal mediation of problems that arise between students and faculty that need to be resolved through the agency of a third party. The Committee functions only when the parties to a dispute are unable to effect a satisfactory solution. At this point, the Committee offers its recommendations to the parties, and if agreement between the parties is still not achieved, forwards its findings with appropriate recommendations to the President of the University via the Vice President for Academic Affairs and the Vice President for Student Affairs.

It needs to be understood by the members of the academic community that if the mediation procedure is to succeed, the integrity of the proceedings must be maintained. This means that high standards of honesty and fairness should prevail and that an atmosphere of mutual respect for the rights of all individuals should be fostered by the actions of all parties to the dispute.

#### New Rule #1

Any complaint of a personal nature (a grievance involving an individual student and a faculty member - see Rule 6 for Class Action Grievance) originating with a student should first be taken to the faculty member involved prior to stating the grievance to the Student Relations Committee. If the grievance is unresolved by the student and the faculty member, they may mutually agree to ask the head of the department to hear the grievance and act as a referee.

Old Rule #1 becomes Rule #2, etc.

New Rule #6 replaces Old Rule #5.

In the event of a Class Action Grievance (a Class Action Grievance is defined as a grievance brought by one or several, past or present, members of a class against an instructor of a class in an effort to rectify a condition which affects all members of a class) Rule #1 may be disregarded and the aggrieved parties may go directly to the Student Relations Committee by the procedure outlined in Rule 2. The Subcommittee to investigate the Class Action Grievance will, if at all possible, attempt to shield the identity(ies) of the student(s) making the grievance from other parties involved in the grievance.

New Rule #23 replaces Old Rule #22.

## RULES AND PROCEDURES OF THE STUDENT RELATIONS COMMITTEE (Continued)

These rules and procedures can be amended by unanimous vote of all committee members. Such rule changes will not affect any case under consideration at the time of the change. Notification of any amendments to these rules and procedures should be given to the President of the University via the Vice President for Academic Affairs and the Vice President for Student Affairs. Notification of any amendments also should be given to the Presidents of the Faculty and Student Senates.

## AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

J. C. Hite (Assoc Prof) presented a paper entitled, "Problems of Finding a Common Denominator for Economic and Ecologic Data in Environmental Impact Assessments," at the 140th annual meeting of the American Association for the Advancement of Science in San Francisco, Feb. 23 - March 1.

## AGRICULTURAL ENGINEERING

C. E. Hood (Assoc Prof) served as program chairman and presided at the Power and Machinery Division at the Southeast Region Meeting of the American Society of Agricultural Engineers held in Memphis, Tenn., Feb. 4-6.

T. R. Garrett (Asst Agr Engr) presented a paper entitled, "Simulation of the Peach Tree System During Swelling to Predict Optimum Harvest Date," at the Southeast Region Meeting of the American Society of Agricultural Engineers held in Memphis, Tenn., Feb. 4-6.

D. T. Hill (Asst Agr Engr) presented a paper entitled, "Managing Nutrients in Animal Waste" at the Southeast Region Meeting of the American Society of Agricultural Engineers held in Memphis, Tenn., Feb. 4-6.

A. G. Jordan (Asst Agr Engr) presented a paper entitled, "Development and Evaluation of a Herbicide Injector/Planter" at the Southeast Region Meeting of the American Society of Agricultural Engineers held in Memphis, Tenn., Feb. 4-6.

R. A. Spray (Asst Prof) presented a paper entitled, "In-Bin Electric Grain Drying, a S. C. Field Study," at the Southeast Region Meeting of the American Society of Agricultural Engineers held in Memphis, Tenn., Feb. 4-6.

GRADUATE COUNCIL MINUTES, FEBRUARY 28, 1974

A special meeting of the Graduate Council was held at 3:00 P.M. on February 28, 1974.

Dean Schwartz called the meeting to order. Those present were: Dr. Mandel, Dr. Camper, Dr. Pennscott for Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart, Dr. Byrns for Dr. Macaulay, Mr. Larry Dickens for Mr. Preston Brown, and Mr. James Kelley.

The minutes of the February 18, 1974 meeting were approved as distributed.

Dean Schwartz gave a summary of the reports submitted by the Evaluation Committees reviewing graduate programs. A discussion and question period followed.

A motion was made to adjourn, seconded and passed.

LANGUAGES

Dionysia, a drama competition for foreign language students, sponsored by the Department of Languages at Clemson, has become a yearly event on the Campus. This year Dionysia 74 will take place on April 5-6. Activities will begin on Friday, April 5, at 4:00 p.m. with an open house in Strode Tower Lounge, Second Floor. This will be followed by a banquet at the Clemson House. At 8:00 p.m. in Tillman Hall Auditorium, Martin Esslin, the renowned drama critic of BBC, will speak on "Brecht's influence in the European theater of today" (admission free). At 9:15 p.m. in Daniel Hall Auditorium the Clemson Players will present Bertolt Brecht's THE THREE PENNY OPERA. There will also be a matinee performance of THE THREE PENNY OPERA on Friday at 4:00 p.m. in Daniel Hall Auditorium. Courtesy tickets will be available for both performances from the Director of Dionysia 74, Dr. Judith M. Melton, of the Department of Languages. Free performances of THE THREE PENNY OPERA may also be seen at 8:00 p.m. in Daniel Hall Auditorium on April 4, 6, 11, 12, and 13. First produced in 1928, this lusty musical, which includes such well-known songs as the Ballad of Mack the Knife, became one of the century's most successful theater pieces:

All day Saturday, April 6, the visiting students will compete in selections from various foreign plays. The event will be concluded with an awards ceremony in Daniel Hall Auditorium. Everyone interested in drama or foreign language is welcome to attend all of these activities. For further information, please contact the Dionysia Committee, Department of Languages, Strode Tower, Room 201 or phone 656-3393.



### CLEMSON JUNIOR ROTC TIGER DRILL MEET

When groups of the Clemson Family get together, plan and carry out a major campus event which benefits the entire family, enhances the University's state wide image, and presents many of Clemson's attractive features to a large assemblage of fine high school upperclassmen, such an accomplishment should be made known to all of the family. This event was primarily planned and managed by the family's best asset, Clemson students.

On March 9th the USAF ROTC Department of Aerospace Studies and the Army ROTC Department of Military Science co-sponsored the Second Annual Junior ROTC Tiger Drill Meet at Littlejohn Coliseum. After many months of planning and coordination, twenty-five South Carolina High Schools that have Army, Navy or Air Force Junior ROTC units sent more than 500 students to compete in events ranging from individual "GI" drill to complex fancy drill by platoon units. Twenty-two trophies were presented in the late afternoon ceremony.

The overall Air Force Trophy was presented to Irmo High School on behalf of the National Headquarters of the Air Force Association, Washington, D.C. by Mr. Burnet Maybank, President of the S. C. Air Force Association.

Capt. (USN) James T. Lazar, Professor of Dairy Science, presented the Navy League trophy to Strom Thurmond High School, Johnston, S. C. as the leading Navy unit.

Carlisle Military Academy won top honors among the Army units as well as best school representation overall. Brig. Gen. Claude M. McQuarrie, Jr., USA (Ret.) presented the Association of the U.S. Army Award and Dr. Victor Hurst, Dean of the University presented the overall winner's Trophy.

Approximately 30 displays and information booths were presented for our visitors, with many academic departments of the University being well represented.

The Clemson Family is especially indebted to all of the Army and Air Force cadets and their organizations that worked so hard to make this event so successful. The majority of the contacts with the participants and other visitors were made by Clemson students who acted as ushers and usherettes, representatives at academic department displays, Pershing Rifle members managing the competition, and for the ROTC service organizations managing the concessions. The University Image was boosted by our students performing in the responsible manner with which we are familiar, but that visitors to Clemson need to see as often as possible.



BIOCHEMISTRY

J. K. Zimmerman (Asst Prof) and Gary Ackers (Prof of Biochemistry and Biophysics, Univ of Va) are the authors of an article entitled, "Effects of Nonuniform Column Packing in Analytical Gel Chromatograph. II. Associating Solutes," which was published in Analytical Biochemistry, 57:578 (1974).

J. K. Zimmerman has been awarded a grant by the Department of Health, Education, and Welfare in the amount of \$30,568 for Studies on Pyruvate Kinase Using Direct Gel Scanning.

CHEMISTRY

A. R. Pinder (Prof) gave an address to the Student Chapter of the American Chemical Society on "Higher Education in Britain," Feb. 28.

J. F. Geldard (Assoc Prof) presented seminars at N. C. State, March 11 and at Furman, March 15 on "Exciton Theory and Absolute Configuration of Coordination Complexes."

CIVIL ENGINEERING

Subhash C. Anand (Assoc Prof) is the co-author with Prof. Philip G. Hodge, Jr. (Univ of Minn) and Dr. Vijay K. Garg (Sr Proj Engr, Electromotive Div, G.M., Lagrange, Ill) of a paper entitled, "A Finite Element Method for Plasticity Problems." The paper was presented at and published in the Proceedings of the Seventh South-eastern Conference on Theoretical and Applied Mechanics, to be held at the Catholic University of America, Washington, D.C., March 21-22.

Subhash C. Anand will be representing the South Carolina Section at the American Society of Civil Engineers SECTION MANAGEMENT WORKSHOP to be held at Hilton Inn, Atlanta, Ga. on March 19-20.

Herbert W. Busching (Assoc Prof and Hd) has been elected to the Board of Directors of the American Road Builders' Association. He will serve in this office through 1976.

DAIRY SCIENCE

At the meeting of the Association of Southern Agricultural Workers in Memphis, Tenn., Feb. 4-6, the following papers were presented: A. B. Bodine (Grad Stu), "BOD Kenetics and Critical Nutrient Ratios in Milk Wastes," J. J. Janzen (Prof) presented a paper, "Flavor and Acceptability of Milk."

### DAIRY SCIENCE (Continued)

J. F. Dickey (Assoc Prof) presented two papers at the Association of Southern Agricultural Workers Meeting in Memphis, Tenn., Feb. 4-6, "Progesterone Levels and Fertility in Post-Partum Holstein Cows," and "Histochemistry of the Bovine Oviduct During the Cycle."

W. A. King (Prof and Hd) was the Honoree for 1974 by the South Carolina Guernsey Cattle Club.

Bruce F. Jenny (Assoc Prof) joined the Nutrition staff of Dairy Science on Jan. 1, 1974.

### ELECTRICAL AND COMPUTER ENGINEERING

J. W. Lathrop (Prof) presented a talk entitled, "Microelectronics - Current State-of-the-Art," before the Piedmont Section of the Institute of Electrical and Electronic Engineers in Greenville on Feb. 22.

### ENGLISH

Richard A. Underwood (Asst Prof) has published Shakespeare's "The Phoenix and Turtle:" a Survey of Scholarship in the Salzburg Studies in English Literature.

### ENTOMOLOGY

Fourteen papers were presented at the 19th annual meeting of the South Carolina Entomological Society in Charleston, Feb. 19-20 by members of the department:

Diurnal Periodicity of Leucocytozoon smithi Gametocytes in Peripheral Blood of Domestic Turkeys and Correlation with Simuliid Vector Activity by R. Noblet (Asst Prof), G. Noblet (Asst Prof) and H. S. Moore (Grad Res Asst).

A Survey of Immature Simuliids in the Piedmont and Mountains of South Carolina by Robert E. Moore (Grad Asst) and R. Noblet.

Survey of the Simuliids of the Coastal Plains and Sand Hills of South Carolina by D. C. Arnold (Grad Res Asst) and R. Noblet.

The Influence of Heated Effluent from Oconee Nuclear Station on Populations of Fresh Water Insects in Lake Keowee. Part I by Madelaine A. Forsyth (Grad Res Asst) and R. C. Fox (Prof).

ENTOMOLOGY (Continued)

The Influence of Heated Effluent from Oconee Nuclear Station on Populations of Fresh Water Insects in Lake Keowee. Part II by Joanne Schultz (Grad Res Asst) and R. C. Fox (Prof).

A Computer Simulation Model for Populations of the Mexican Bean Beetle on Soybeans by Van Waddill (Grad Res Asst), Merle Shepard (Asst Prof) and G. R. Carner (Asst Prof).

Notes on the Biology and Rearing of Pine Cinaran Aphids by Keith H. Griffith (Grad Res Asst).

A Public Relations Program for Agricultural Sciences by T. E. Skelton (Assoc Prof).

A Survey of Hymenopterous Parasitoids on South Carolina Poultry Farms by J. R. Ables (Grad Res Asst) and Merle Shepard.

Field Studies of Disease Incidence in Pseudoplusia includens (Walk) and Anticarsia gemmatilis (Hub.) by Gary C. Newman (Grad Res Asst) and G. R. Carner.

Diseases of Lepidopterous Larvae in Soybeans by G. R. Carner.

Mound Establishment and Movement by Field Colonies of the Red Imported Fire Ant, Solenopsis invicta Buren by Paul M. Horton (Ent Asst, Plant Pest Reg Service).

Efficacy of Rabon<sup>R</sup> Poultry Feed Additive for the Control of Synanthropic Flies in Poultry Litter by J. B. Kissam (Assoc Prof).

Response of the Housefly (Musca domestica) and it's Parasitoid Muscidifurax raptor to Largon<sup>R</sup> (1-4-chlorophenyl)-3-(2,6-difluorobenzoyl)-urea) by Robert P. West (Grad Res Asst) and Merle Shepard.

S. B. Hays (Prof and Hd) participated in a conference on boll weevil elimination and suppression technology in Memphis, Tenn., Feb. 19.

Merle Shepard attended and gave a talk to the NSF-IBP Conference in New Orleans, La., Feb. 22-27 on soybean predators.

Rodney Holloway (Asst Prof) participated in the Tall Timbers Conference on Ecological Animal Control by Habitat Management in Gainesville, Fla., Feb. 27 - March 2.

## FOOD SCIENCE

A paper entitled, "Changes in Meat Components During Fermentation, He Processing, and Drying of a Summer Sausage," Technical Contribution No. 1090, recently appeared in J. Food Sci. 38:1228-1231. Authors are F. B. Wardlaw (Res Tech, Food Sci), G. C. Skelley (Prof, Ani Sci), M. G. Johnson (Asst Prof) and J. C. Acton (Asst Prof).

The following papers were presented at the 71st meeting of Southern Association of Agricultural Scientists, Memphis, Tenn., Feb. 3-6:

"Quality Polyunsaturated Pork. II. Fat analyses," R. F. Borgman (Prof), G. C. Skelley (Prof, Ani Sci), D. L. Handlin (Assoc Prof, Ani Sci), J. C. Acton (Asst Prof) and J. C. McConnell (Asst Prof, Ani Sci).

"Compositional Evaluation of Commercial Dry Sausages," J. C. Acton and R. L. Dick (Res Tech).

"Measurement of Polyphenoloxidase, Peroxidase and Aspartate Aminotransferase Activities During the Maturation of Peaches," J. J. Jen (Asst Prof).

"Methods for the Isolation of Obligate Anaerobic Bacteria from Proteinaceous Foods," W. M. Gray (Grad Stu, Micro) and M. G. Johnson (Asst Prof). Mr. Gray was presented \$50 award for best paper in student competition.

James C. Acton was presented the Professional Scientist Award of 1973 by the Food Science and Technology Section of the Southern Association of Agricultural Scientists.

M. G. Johnson reviewed an introductory microbiology laboratory manual entitled, "MELE (Meaningful, Enjoyable, Learning Experiences) in Microbiology" by Donald P. Durand et al., Iowa State University, and printed by Burgess Publishing Company. This review will be published in the April 1974 issue of ASM News, the national monthly information magazine of the American Society for Microbiology.

## GEOLOGY

The following article by R. D. Hatcher, Jr. (Assoc Prof) has been published in the American Journal of Science, v. 274, pp. 135-147, 1974 (Feb.): North American Paleozoic Foldbelts and Deformational Histories: A Plate Tectonics Anomaly?



## HISTORY

E. M. Lander (Alumni Prof) read "The Reluctant Imperialist: South Carolina and the Mexican War," at the meeting of the Texas State Historical Society in Waco, March 1.

At the 17th Annual Missouri Valley History Conference, March 7-9 in Omaha, Neb., J. V. Reel (Assoc Prof) read, "The Darcys and the Battle of Boroughbridge," and W. F. Steirer, Jr. (Asst Prof) read "A Strange Combination: The Marxist-Romantic Historian of the South, Eugene D. Genovese."

J. L. Arbena (Assoc Prof) was a session critic for two papers delivered at the University of Alabama Conference in Tuscaloosa, March 12, on Modern Colombia.

## HORTICULTURE

Recent publications: G. E. Stembridge (Prof) and J. W. Raff. 1973. Ethephon and Peach Fruit Development. HortScience 8:500-501.

G. E. Stembridge, J. W. Raff and N. Veinbrants. 1973. Seed Development in Peach and Nectarine During Induction of Fruit Abscission with Ethephon. HortScience 8:501-502. Co-authors are Research Officers, Victoria (Australia) Department of Agriculture.

G. E. Stembridge presented a talk entitled, "Growth Regulators for Apples," at the annual meeting of the Middle Georgia Apple Growers Association in Byron, Ga., Feb. 13.

J. R. Haun (Assoc Prof) participated in a meeting of the Phytotron Advisory Committee for the Southeastern Plant Environment Laboratories (SEPEL) at Raleigh and Durham, N. C. on Feb. 20-21. SEPEL is a \$4 million two-unit phytotron, constructed largely by National Science Funds and operated by North Carolina State and Duke Universities as a regional laboratory.

## INTERDISCIPLINARY STUDIES

M. Spector (Asst Prof) is principal investigator on a \$5,000 (per year) contract received from the Greenville Hospital System for the electron microscope study of renal biopsies. The results of the electron microscope studies will be used to assist in the diagnosis of a variety of diseases involving the kidney.

### MATHEMATICAL SCIENCES

Renu Laskar (Assoc Prof) gave a colloquium lecture entitled, "Finite geometries, block designs and related graphs" to the Mathematics Department of UNC at Charlotte on Feb. 1.

Richard A. Lewallen (Asst Prof) presented a paper at the Computer Science Conference in Detroit on Feb. 14. The paper was entitled, "Reduced Programming Effort and Increased Device-Independence through Structured Development of Interactive Programs."

John Kenelly (Prof and Hd) gave an invited talk to Washington State, Pullman Wash., on March 12 entitled, "Quantitative Modeling."

Robert E. Fennell (Asst Prof) attended a Chautauqua-type short course entitled, Mathematical Modeling and Computing in the Mathematical, Physical, and Engineering Sciences. The course was sponsored by National Science Foundation and was held at Clark College, Atlanta, Ga., on Nov. 5-6.

R. E. Fennell (Asst Prof) and T. G. Proctor (Assoc Prof) have had the following article published recently: "Perturbations of Nonlinear Differential Equations," Transactions of the Amer. Math. Soc. Vol 185, November 1973, p. 401.

### MECHANICAL ENGINEERING

W. E. Castro (Assoc Prof) has been elected as chairman of the Mechanics Division of the Southeastern Section of ASEE. He will assume this office during the annual meeting at Tennessee Technological University, March 31-April 2.

### MICROBIOLOGY DEPARTMENT

Ann W. Baxter (Assoc Prof) will be serving as a member of an advisory panel to assist in designing an advanced undergraduate curriculum in biological sciences for the University of Texas at Dallas.

### MUSIC

Joseph Jackson (Lect) served as adjudicator for South Carolina's NATS Student Auditions at the University of South Carolina on March 9.

## PHYSICS AND ASTRONOMY

P. B. Burt (Prof) had a paper entitled, "Borel Summability of a Partial Propagator in a Self-Interacting Field Theory" published in Journal of Physics A, Vol. 7, No. 3, 1974, pp. 356-359.

F. J. Keller (Assoc Prof) has received a grant from NSF for a Summer Institute in the amount of \$29,185.

J. R. Ray (Assoc Prof) and T. M. Davis (Grad Stu) had a paper entitled, "Ghost Neutrinos in General Relativity" published in Phys. Rev. D. Vol. 9, p. 331, January, 1974.

## PLANT PATHOLOGY AND PHYSIOLOGY

The staff members and graduate students presented the following papers at the annual meeting of the Southern Division of the American Phytopathological Society at Memphis, Tenn., Feb. 3-6:

"Some effects of soil fumigation related to peach tree short life," W. C. Nesmith (Grad Res Asst) and W. M. Dowler (Res Plant Path, USDA).

"The effect of propionic acid on fungi in culture and on stored barley and corn grain," G. C. Kingsland (Assoc Prof) and Frances I. Stewart (SSTP Stu).

"Virus-free plants from infected clones of Trifolium repens," O. W. Barnett (Asst Prof), A. Seo (Agr Sci Asst) and P. B. Gibson (Res Agron).

"Induced conidial formation in Alternaria zinniae grown on media amended with Morestan," L. W. Baxter (Prof) and Kathryn L. Ellers (Lab Tech).

"Effectiveness of certain fungicides for controlling four diseases of pecans," C. E. Drye (Grad Res Asst) and R. W. Miller (Asst Prof).

## POULTRY SCIENCE

W. T. Derieux (Vet II) presented "Use of Oral Vaccine to Control Turkey Cholera" at the Ohio Egg, Turkey, Broiler Conference in Columbus, Ohio on Feb. 22.

D. L. Cross (Asst Prof) published "Plasma and Rumen Fluid Components of Steers fed Two Sources and Levels of Nitrogen" co-authored by R. L. Ludwick, J. A. Boling and N. W. Bradley. Journal of An. Sci. 38:404.

### RECREATION AND PARK ADMINISTRATION

G. E. Howard (Assoc Prof) assumed the responsibilities of Vice-President, Recreation Division, Southern District of the American Association for Health, Physical Education and Recreation at the District Convention in Norfolk, Va.

### COLLEGE OF FOREST AND RECREATION RESOURCES

W. H. Davis McGregor (Dean) was named Chairman Elect in recent balloting in the Appalachian Section, Society of American Foresters. He assumes the Section Chairman Elect position after serving as South Carolina Subsection Chairman for 1973.

### POLITICAL SCIENCE

Governor John C. West has named Jack E. Tuttle (Associate Professor of Political Science), Charles W. Dunn (Associate Professor and Head of the Political Science Department) and Martin Slamm (Assistant Professor of Political Science) to be the official delegates of the State of South Carolina to the 78th Annual Meeting of the American Academy of Political and Social Science on April 5 and 6, 1974, in Philadelphia, Pennsylvania.



# CALENDAR OF CAMPUS EVENTS

- 1 -- German Film, Daniel Auditorium, 7 p.m. Open to the public, admission free. Sponsored by the Department of Languages.
- 1 -- Marionette Rendition of Canterbury Tales, Food Industries Auditorium, 8 p.m. Open to the public, admission \$1, 50¢ with student I.D. Sponsored by the Student Union.
- 1 -- Workshop on Chaucer, Food Industries Auditorium, 4 p.m. Open to the public, admission free. Sponsored by the Student Union.
- 2 -- Baseball - Georgia at Clemson, 3 p.m.
- 2 -- Seminar - Donald F. Hunt, University of Virginia, "Chemical Ionization Mass Spectrometry. A Tool For Structure Identification." 131 Brackett Hall, 4:30 p.m. Sponsored by the Chemistry Department.
- 2 -- The World of Trivia, a lawyer and a college professor delve into the past for tidbits of trivia (example: What is Mickey Mouse's original name?). The audience will be invited to stump the speakers and certificates will be awarded to those who do. Sponsored by the Speakers Bureau. Tillman Hall, 7 p.m. Open to the public, admission free.
- 3 -- Lecture - Professor Harold J. Oliver of the University of New South Wales, Sydney, Australia, "The English Language in Australia and America," Daniel Auditorium, 4 p.m. Open to the public.
- 4 -- Two day conference, IEEE Carolinas Technical Conference "Today's Electrical Power," Continuing Engineering Education. Expected enrollment 150.
- 4 -- Clemson University Woman's Club Luncheon, Clemson House, 12:30 p.m.
- 4 -- "The Future of the American Presidency Lecture Series, Part 11." Avery Leiserson, president of the American Political Science Association, discusses "Social Unrest and the Presidency," Daniel Hall Auditorium, 3:30 p.m. Final program in the series. Open to the public, admission free. Presented by College of Liberal Arts.
- 4 -- "The Threepenny Opera" by Bertolt Brecht, presented by the Clemson University Players drama troupe. Daniel Hall Auditorium, 8 p.m. Open to the public, admission free.
- 4 -- The University Club monthly luncheon, Purple Room, Clemson House, 12 Noon. Open to Clemson faculty and staff.
- 5 -- Military Banquet, Harcombe Dining Hall, 7 p.m.  
Military Ball, National Guard Armory, 9 p.m.
- 5-6 -- "Dionysia '74" drama competition by students from schools in several states who present plays in French, German, Russian and Spanish. British drama critic Martin J. Esslin will deliver the keynote address on Bertolt Brecht's influence in the European theater of today. Tillman Hall Auditorium, 8 p.m. Open to the public, admission free.

- 6 -- "Dionysia '74" - actual student competitions and awards and prizes ceremony. To begin at 9 a.m., French, Tillman Hall Auditorium; German, McAdams Auditorium; Russian, Hardin Auditorium; Spanish, Food Industries Auditorium.
- 6 -- "The Threepenny Opera" continues. Daniel Hall Auditorium, 8 p.m.
- 6 -- Future Farmers of America State Livestock Judging Contest, 11:45 a.m., Bull Test Station Building. Open to the public. Co-sponsored by the Department of Agricultural Education and the Department of Animal Science.
- 6 -- Future Farmers of America State Agricultural Mechanics Contest, 11:45 a.m., McAdams Hall. Open to the public. Co-sponsored by the Department of Agricultural Education and the Department of Agricultural Engineering.
- 7-26 -- Mercer College - Two Man Show, Works from Sam Hutto, painter, and Elmer Taylor, potter, both faculty members of Mercer College in Macon, Georgia. Rudolph Lee Gallery, College of Architecture. Gallery open 9 - 4:30 p.m. weekdays.
- 9 -- Clemson University Concert Band. Tillman Hall Auditorium, 8 p.m. Open to the public, admission free. Sponsored by the Department of Music.
- 9 -- Baseball - Georgia Tech at Clemson, 3 p.m.
- 9 -- Tennis - University of Alabama at Clemson, 2 p.m.
- 10 -- Honors and Awards Day, Classes Suspended at 12 Noon.
- 10 -- Tennis - Florida State University at Clemson, 2 p.m.
- 10 -- Easter Egg Hunt for the children (between the ages of 5 and 10) of Clemson University faculty and staff will begin on the front lawn of Dr. and Mrs. R.C. Edwards at 4:30 p.m. and activities will conclude at 6 p.m. Includes planned games, egg decorating contest (entries submitted on arrival) and prizes. Children will be supervised and parents are welcome to attend. Sponsored by Kappa Kappa Gamma.
- 11-13 -- "The Three Penny Opera" continues, Daniel Hall Auditorium, 8 p.m.
- 11 -- Lecture - "Questioning Techniques" to be discussed during Reading Conference Workshop by renowned educator Eleanor Ladd of Temple University, Brackett Hall Auditorium, 7:30 p.m. Lecture open to the public. Sponsored by the College of Education.
- 11-14 -- Egg and Art Exhibition. An exhibition of decorated eggs, egg shell mosaics and other art related to eggs and feathers. Food Industries Auditorium, 10 a.m. - 5:30 p.m., April 11-13; 1-5:30 p.m., April 14. Open to the public, admission free. Deadline to enter art is April 8, entry blanks may be obtained from the Department of Poultry Science.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

APR 16 1974

Vol. 13 No. 16

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM

April 15, 1974

## University Energy Consumption Shows Marked Decrease

Turning off the office light during the lunch hour or lowering dormitory thermostats a few degrees may appear insignificant and of little value in helping America's energy woes.

But Clemson University officials have found that simple measures such as these do make a difference in energy use. When practiced regularly on a cooperative campus-wide basis, they add up to considerable and meaningful savings in all utilities.

This is the report from Roy M. Rochester, director of the University Physical Plant Division, based on a comparison of energy consumption data for the past four months with the corresponding period one year ago.

Rochester was appointed by President R.C. Edwards last fall to serve as the University Conservation Officer who oversees the entire campus conservation program.

Rochester's report lists comparison figures for all utilities (electricity, steam, domestic water) and also compares the monthly mileage driven by motor pool vehicles since last November with the corresponding period a year ago.

In each comparison period for both utilities and auto mileage, the report shows that a decrease has occurred, sometimes markedly, since all Americans became more energy conservation conscious last fall and the University urged faculty, staff and students to practice various conservation measures.

For example, in the period between Jan. 17 and Feb. 18 of this year, the report

shows a reduction of 31 per cent in the use of steam, an 11 per cent decrease in water consumption, and a seven per cent drop in electricity used.

When the period between Dec. 20, 1973 and Jan. 17 of this year was compared to the same period one year ago, Rochester noted a 42 per cent reduction in the amount of water used, a 33 per cent drop in steam consumed, and a 19 per cent decrease in electrical energy requirements.

The mileage logged by motor pool vehicles has been reduced significantly since last fall, added Rochester. This has been achieved by pooling trips whenever feasible, eliminating non-essential trips, and conducting more business by phone whenever practical.

Rochester attributes the energy savings in utilities and gasoline to the cooperative efforts of the entire University family and to steps taken by the Physical Plant Division which have yielded substantial savings.

He also noted that warmer weather this past winter was responsible for greater savings in steam energy but resulted in a corresponding increase in electrical requirements for cooling.

"We have eliminated all decorative lighting on building exteriors," said Rochester, "and other lighting when it is not absolutely necessary for security." When buildings are unoccupied such as on weekends or holidays, pumps, compressors, fans and other electrical powered devices used primarily for heating-cooling systems are turned off.

He believes that students have become more savings conscious and this is reflected in more sensible use of hot water, lowering dormitory thermostats and keeping windows closed on cold days.



"We have encouraged persons to report water and steam leaks, and have rechecked insulation on hot water, chill water and steam lines," said Rochester. "The steps we have taken to date were relatively easy to accomplish, but required the cooperation of everyone.

"There are additional savings that we can realize but some modifications are necessary which are time-consuming and require greater planning. Minor changes will be required in the controls of our mechanical and electrical systems," said Rochester.

Two committees composed of student and faculty members were also created last fall to serve as the "brain trust" for the conservation program. The Energy Conservation Committee formulates ideas and acts as a clearing house for ideas from anyone in the University family about reducing energy consumption. Its members are Professor Douglas W. Bradbury, Professor, Dept. of Mechanical Engineering; Miss Barbara C. Clark, student; Mr. Martin Gilchrist, Student Affairs; Dr. Frederick J. Keller, Associate Professor, Dept. of Physics; Dr. Donald W. Lyons, Associate Professor, Dept. of Textiles; Mr. Robert G. Merrill, graduate student, Dept. of Textiles; Coach Robert W. Smith, Manager Littlejohn Coliseum; Mr. Robert L. Vickery, student.

A second group, the Energy Conservation Implementation Committee, develops policies and procedures and furnishes technical advice necessary to implement the approved energy conservation ideas generated by the first group. Its members are Dr. Adolph L. Beyerlein, Associate Professor, Dept. of Chemistry and Geology; Mr. Louis Oneal Clamp, Jr., student; Miss Mary Ella Dease, student; Mr. Ronald W. Eck, graduate student, Dept. of Civil Engineering; Professor J.L. Edwards, Assistant Professor, Dept. of Engineering; Professor Ernest B. Rogers, Associate Professor, Dept. of Agricultural Engineering; Mrs. Cathy C. Turner, Assistant Dean of Students; Dr. William C. Whitten, Jr., Professor, Dept. of Economics.

Subcommittees are looking into the possibility of rescheduling certain classes to

make maximum use of buildings and utility systems, said Rochester.

### Bicycle Code Amended

The Clemson University Board of Trustees has authorized the Administration to amend the Bicycle Code, deleting all references to registration of bicycles.

The Board met on campus in Sikes Hall March 29.

Also approved was the appointment of Dr. Joseph Ellis Baker as the William James Lemon Professor of Literature for the 1974-75 academic year. Dr. Baker, Professor Emeritus of English at the University of Iowa, has been serving during the spring semester as the William James Lemon Professor of Literature.

In other actions, the Board approved:

- Revisions or amendments to the Witchweed Quarantine, Sweetpotato Weevil Quarantine, and Regulation 2 covering the movement of horses and mules into the state.

- Continued employment for the 1974-75 academic year for Professor Robert D. England of the Department of History and Visual Studies, College of Architecture; and Dr. Francis Robert Himsworth of the Department of Industrial Management, College of Industrial Management and Textile Science.

### J.M. Stepp Installed as President of Southern Regional Science Association

Prof. James M. Stepp, agricultural economist at Clemson, was installed as president of the Southern Regional Science Association at its annual meeting in Arlington, Virginia April 4-5.

Some 150 economists, geographers, demographers, political scientists and planners from 25 states, the District of Columbia and Canada attended the two-day meeting.



The group conducted sessions on land use and development, environmental analysis, migration, transportation and housing, and government finance. A special roundtable session discussed regional aspects of the energy crisis.

The Southern Regional Science Association comprises some 400 scholars, planners and public administrators with membership concentrated in the Southeast.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, APRIL 1, 1974

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Joseph B. McDevitt, Walter T. Cox, Luther P. Anderson, H. Morris Cox, John D. Fulton, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, K. N. Vickery, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis, Edward L. McLean and E. N. Tyndal  
Secretary.

1. Minutes

The minutes of the meeting of March 4, 1974 were approved as submitted.

2. Policy for Withdrawal from Graduate Courses

The Dean of the University recommended that the policy for withdrawal from graduate courses be identical to the new undergraduate policy; namely, that the grade of W will be used in place of WP and WF and that final grades will be given to students enrolled during the last five weeks of the semester.

Action: Approved.

3. Curriculum Changes

Statement and Recommendation: The Dean of the University recommended additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, APRIL 1, 1974 (Continued)

## I. COLLEGE OF ARCHITECTURE

A. Graduate Course Credit Changes

Arch 853	Architectural Studies, Var 6-9 (0 and 18-27)
Arch 854	Architectural Studies, Var 6-9 (0 and 18-27)

This adjustment in credit is to allow greater flexibility in curriculum for graduate students in the 4-2 or 5-1 program options.

## II. COLLEGE OF EDUCATION

A. New Undergraduate Courses

Ed 429	Teacher as Manager, 3 cr. (3 and 0)
Ed 476	Practicum in Instruction for Exceptional Children, 3 cr. (1 and 4)
InEd 460	Introduction to Career Education, 3 cr. (3 and 0)

B. Undergraduate Course Change

AgEd 401	Methods in Agricultural Education, 3 cr. (2 and 3) (Change in laboratory hours only.)
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C. New Graduate Courses

Ed 629	Teacher as Manager, 3 cr. (3 and 0)
Ed 676	Practicum in Instruction for Exceptional Children 3 cr. (1 and 4)
InEd 660	Introduction to Career Education, 3 cr. (3 and 0)

D. Graduate Course Change

AgEd 601	Methods in Agricultural Education, 3 cr. (2 and 3) (Change in laboratory hours only.)
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MINUTES OF THE EDUCATIONAL COUNCIL MEETING, APRIL 1, 1974 (Continued)

III. COLLEGE OF FOREST AND RECREATION RESOURCES

A. New Undergraduate Course

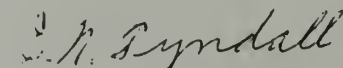
RPA 390      Special Projects in Recreation and Parks, 1 cr. (1 and 0)

IV. COLLEGE OF PHYSICAL, MATHEMATICAL, AND BIOLOGICAL SCIENCES

A. Undergraduate Changes

Astr 101      Solar System Astronomy, 3 cr. (3 and 0)  
(Change in number only from Astr 201 to Astr 101.)  
Astr 102      Stellar Astronomy, 3 cr. (3 and 0)  
(Change in number only from Astr 202 to Astr 102.)  
Astr 103      Solar System Astronomy Laboratory, 1 cr. (0 and 2)  
(Change in number only from Astr 203 to Astr 103.)  
Astr 104      Stellar Astronomy Laboratory, 1 cr. (0 and 2)  
(Change in number only from Astr 204 to Astr 104.)  
Geol 101      Physical Geology, 4 cr. (3 and 2)  
(Change in lab hours from 3 to 2.)  
Phys 223      Physics Laboratory I, 1 cr. (0 and 3)  
(Change in title and description only.)  
Phys 224      Physics Laboratory II, 1 cr. (0 and 3)  
(Change in title and description only.)  
Phys 245      Energy Sources for the Future, 3 cr. (3 and 0)  
(Change in title, description and credit hours.)

Action: Approved.

  
E. N. Tyndall  
Secretary



GRADUATE COUNCIL MINUTES, MARCH 8, 1974

The Graduate Council met at 3 P.M. on Friday, March 8, 1974 in the Conference Room of E-103 Martin Hall. Dean Schwartz called the meeting to order. Those present were: Dr. Brown, Dr. Gahan, Dr. Mandel, Dr. Camper, Dr. Freeze, Professor Means, Dr. Gauthreaux, Dr. Dysart, Mr. Preston Brown, and Mr. James Kelley.

The minutes of the February 28, 1974 meeting were approved as distributed.

The following new courses and changes were approved:

COLLEGE OF ARCHITECTURE

- Arch 853 - Architectural Studies (credit adjustment)
- Arch 854 - Architectural Studies (credit adjustment)

COLLEGE OF EDUCATION

- Ag Ed 601 - Methods in Agricultural Education (change in lab hours)
- Ed 629 - Teacher as Manager
- Ed 676 - Practicum in Instruction for Exceptional Children
- In Ed 660 - Introduction to Career Education

The following course was tabled:

COLLEGE OF EDUCATION

- In Ed 615 - Construction Practices

Dr. Gauthreaux, chairman of the subcommittee on Withdrawal Policy, distributed the following recommendation:

"That the Graduate School's withdrawal policy be changed to conform with the new undergraduate policy regarding withdrawal from a course."

This policy becomes effective upon approval by the Educational Council. A motion was made, seconded, and passed to accept the committee's recommendation.

The request for deletion of departmental qualifying exams for provisionally admitted Master of Engineering students was discussed. A motion was made, seconded and approved with one abstaining to table action on this request.

GRADUATE COUNCIL MINUTES, MARCH 8, 1974 (Continued)

Dean Schwartz suggested that the Council might need to consider the residence requirement for Ph.D.'s in relation to University employees. A subcommittee was appointed consisting of Dr. Camper, chairman, Dr. Gauthreaux, Dr. Mandel, and Dr. Dysart. The committee was asked to examine the circumstances, if any, whereby a full time employee may satisfy residence requirements for a Ph.D. degree.

Guidelines from the Department of Languages concerning locally prepared foreign language exams were distributed as information.

Dr. Dysart presented a progress report on the proposed Ed.D. program in Occupational Education. He stated that a thoroughly documented report would be available by the next meeting of the Council to be held April 5, 1974.

OFFICE OF GRADUATE STUDIES

Dr. Farrell B. Brown, Professor of Chemistry and Assistant to the Dean of Graduate Studies, has been named Assistant Dean of Graduate Studies, effective July 1, 1974, according to Dr. Victor Hurst, Vice President for Academic Affairs and Dean of the University. Dr. Brown received his bachelor's degree from Lenoir-Rhyne College and his master's and Ph.D. degrees from the University of Tennessee. He has been a member of the Clemson University faculty since 1963 when he was appointed as Assistant Professor of Chemistry. He became an Associate Professor in 1967 and was promoted to the rank of full Professor in 1973. Dr. Brown is a member of the American Chemical Society, the South Carolina Academy of Science, the Society of the Sigma Xi, and the American Cryptogram Association.

MINUTES OF THE ADMINISTRATION-FACULTY-STUDENT COUNCIL MEETING,  
MARCH 6, 1974

Chairman David Rowe called the regular meeting of the AFSC to order at 3:35 p.m., in Sikes Hall Board Room.

All members of the Council were present except Dr. John Fulton.

ACTION: (Motion by Dr. Steirer) There being no corrections, the minutes of the meeting of February 5, 1974, were approved as distributed.

A proposed class attendance policy developed by a subcommittee of the Undergraduate Council was distributed to members of the Council for comments. The proposed policy will be presented to the full Undergraduate Council next week. The text of the proposal follows:

- "(1) Regular and punctual attendance at all class and laboratory sessions is the responsibility of each student. College work proceeds at such a pace that regular attendance is necessary in order for each student to obtain maximum benefits from instruction. All absences are matters to be resolved between the instructor and the student. In the event that a student finds it necessary to absent himself from a class, it is his responsibility to make up resulting deficiencies.
- (2) Students desiring to withdraw from a class must secure a drop card from the Registrar's office prior to terminating attendance. A student who incurs excessive absences may be dropped from a course.
- (3) Students shall have protection through orderly procedure against prejudicial or capricious academic evaluation. No faculty member or administrator shall consider it his prerogative to go beyond established academic policy. Students whose academic freedoms may have been abridged have the right to seek redress.
- (4) A student enrolled in the last five weeks of classes shall have final grades recorded."

ACTION: (Motion by Mr. Findley) The Council voted to strike out the phrase in Section (3), "established academic policy," and insert in its place, "this established attendance policy;" and to substitute for Section (4) the following paragraph: "A student enrolled at the commencement of the last five weeks of classes shall have final grades recorded."

ACTION: (Motion by Mr. Findley) A move to consider the class attendance policy with the preceding changes was properly seconded.

In discussion a majority of the Council agreed that the last sentence of Section (1) should be reworded to make it more specific.

MINUTES OF THE ADMINISTRATION-FACULTY-STUDENT COUNCIL MEETING,  
MARCH 6, 1974 (Continued)

ACTION: (Motion by Mr. Young) The Council voted to strike out the last sentence of Section (1), and insert in its place the following: "In the event a student absences himself from a class for a reason considered valid by the instructor concerned, it is the student's responsibility, with the cooperation of the instructor, to make up resulting deficiencies."

ACTION: Following this action the Council voted without dissent on Mr. Findley's motion to recommend the policy (as amended); this recommendation to be forwarded to the Student and Faculty Senates with a record of the AFSC's actions. The policy, as it is recommended by the AFSC thus reads as follows (amended portions are underlined):

- "(1) Regular and punctual attendance at all classes and laboratory sessions is the responsibility of each student. College work proceeds at such a pace that regular attendance is necessary in order for each student to obtain maximum benefits from instruction. All absences are matters to be resolved between the instructor and the student. In the event a student absences himself from a class for a reason considered valid by the instructor concerned, it is the student's responsibility, with the cooperation of the instructor, to make up resulting deficiencies.
- (2) Students desiring to withdraw from a class must secure a drop card from the Registrar's office prior to terminating attendance. A student who incurs excessive absences may be dropped from a course.
- (3) Students shall have protection through orderly procedure against prejudicial or capricious academic evaluation. No faculty member or administrator shall consider it his prerogative to go beyond this established attendance policy. Students whose academic freedoms may have been abridged have the right to seek redress.
- (4) A student enrolled at the commencement of the last five weeks of classes shall have final grades recorded."

Student Senate bill B7448 on an Honor System for Clemson is awaiting final disposition by the appropriate authority.

ACTION: (Motion by Col. McCarter) Consideration of this subject was put on the agenda for the AFSC meeting scheduled April 2. The secretary was asked to distribute copies of the bill as it is presently written to members of the Council.

There being no further business before the Council at this time, adjournment was called at 5:05 p.m.

George Moore, Secretary



Minutes of the meeting of  
THE ADMINISTRATION-FACULTY-STUDENT COUNCIL  
CLEMSON UNIVERSITY  
Tuesday, April 2, 1974

Chairman David Rowe called the regular meeting of the AFSC to order at 3:40 p.m. in Sikes Hall Board Room.

Members of the Council absent were John Fulton, E. H. McCarter and Joseph B. McDevitt.

ACTION: (Motion by Dr. Steirer) There being no corrections, the minutes of the meeting of March 6, 1974 were approved as distributed.

Dr. Steirer reported that the Faculty Senate had approved the class attendance policy recommended by the AFSC (see minutes of March 6, 1974).

Copies of the Honor System bill passed by the Student Senate January 31, 1974 (B-74-48) were distributed to members of the Council for comment and discussion.

The bill as written is essentially what the Faculty Senate approved on an earlier date. It was the consensus of the Committee that the substance of discussion on the Bill be conveyed to their colleagues who may serve on the Council next year.

The Council expressed their thanks to the Chairman and Secretary for their service to the Council, and at 4:45 p.m., the Council adjourned *sine die*.

MINUTES OF THE UNIVERSITY AUDIO-VISUAL COMMITTEE, FEBRUARY 13, 1974

Present: Bill Beckwith, Revis Frye, Mike Jutras, Jack Wall, Sam Wang, Betty Watkins.

Chairman Wang called the meeting to order at 3:00 p.m.

Mike Jutras, reporting for Harry Durham, announced that the Panasonic Road Show Display would be on exhibit, March 5-6.

Betty Watkins reported on academic courses on audio-visual techniques. She stated that a class, A-V 496-497, would be offered at night July 2-19. The committee discussed interdisciplinary coordination of a-v courses. Mike Jutras was asked to chair a sub-committee to study such coordination.

The committee discussed further the centralization of university a-v hardware and software.

The University Audio-Visual Committee would like to compliment formally Dr. Tom Douglass on his excellent work in developing the University A-V Holdings and Needs Survey sheet. The subcommittee thanks all those who completed the forms. It was pointed out that the following seven contacts failed to respond to the survey:

Department of Aerospace Studies - D. W. Rabey  
Department of Agricultural Education - E. T. Carpenter  
Department of Animal Science - R. F. Wheeler  
Department of Architectural History and Visual Studies - T. E. McPeak  
Department of Environmental Systems Engineering - J. F. Andrews  
Department of Horticulture - T. L. Senn  
Department of Mechanical Engineering - J. C. Hester

In his report on the a-v survey, Mike Jutras made the following recommendations:

1. Someone with a thorough understanding of a-v equipment should be available to serve as coordinator and adviser of a-v information for the departments on campus.
2. The survey information should be turned over to Bob Towe of the Communications Center as a reference guide for a-v services and for the expansion of such services.
3. The University Administration should be made aware of the need for funds for the purchase of software materials as indicated by the survey.

The recommendations were approved by the committee. Dr. Jutras was commended on the excellent survey report.

MINUTES OF THE SCHOLARSHIPS AND AWARDS COMMITTEE, FEBRUARY 26, 1974

The Scholarships and Awards Committee met at 3:30 p.m. in Room E-103 Martin Hall with Chairman Corinne Sawyer presiding.

Dr. Sawyer first called the attention of the Committee to the fact that the Committee's first four choices for Poole Scholarships had accepted. Because of the rapid acceptance of the scholarships by candidates, Dr. Sawyer suggested that the offers continue to be made early in future years.

An item of old business discussed was the Albert Blanchard Carr Scholarship. A problem had arisen in the case of a student accepting the scholarship funds while not wholly qualifying as a full-time student under the University definition. It was suggested, and approved unanimously, in full committee discussion that the definition of "enrolled as a full-time undergraduate student at Clemson University" for the purposes of determining the awarding of or the continuation of all Clemson University Scholarships be as follows:

That the student shall be receiving from Clemson University full-time resident credit for classes taken during the semester(s) for which the scholarship is to be awarded or continued.

Thus a student in our medical technology program, although living at and attending classes at a cooperating hospital, because he receives resident credit from Clemson for his classes, still qualified as a full-time Clemson student and may receive financial aid from the Carr scholarships.

On the other hand, a student who leaves Clemson to attend the Medical University at Charleston, although he might still be technically considered a Clemson student in that he will receive a B.S. degree from Clemson at the same time he receives his M.D. from Charleston, pays his tuition to and receives his resident credit from the Medical University and will not be eligible to receive financial aid from the Carr scholarships for those semesters during which he is no longer at Clemson but is actually resident at the Medical University.

W. C. Whitten moved that the appropriate administrators utilize all practical efforts to reclaim funds from the Carr Scholarship recipient in the discussed case. The motion was seconded and carried.

Under new business, six items of business were discussed and acted upon.

1. Nominees for two awards in the College of Agricultural Sciences were approved.
2. The requests of two students for an advance of Poole Scholarship funds for summer school were brought to the attention of the committee.

MINUTES OF THE SCHOLARSHIPS AND AWARDS COMMITTEE, FEB. 26, 1974 (Continued)

A motion was made to advance the funds to the students and approved unanimously. In a discussion of how much of the funds were to be advanced, the following policy was approved: "An amount not to exceed one-half of one semester's funds shall be advanced to a Poole Scholar, upon his request and its approval by the Committee, for each summer session he wishes to attend. It is understood that the student will take a minimum of four credits during any given session to qualify for the full funding."

3. It was moved and approved unanimously to award the American Association of University Women Award to the suggested recipient provided that she met the requirements of the Committee, notably, the requirement of three years' course work at Clemson.
4. Colonel Bloss' suggested nominee for the Copeland Award received unanimous approval from the Committee.
5. Letters of nomination for the Algernon Sydney Sullivan non-student Award were read by the Committee; there being no discussion, a secret ballot was taken, and the recipient thus chosen was approved.
6. Nominations for the Algernon Sydney Sullivan student Award were presented, along with appropriate service records, by Dean Delony and Dean Coakley. W. C. Whitten moved that two awards be made: one to the male student receiving the highest number of Committee votes, and one to the female student receiving the highest number of Committee votes; the motion was approved unanimously. After discussion of the candidates, a secret ballot was taken and the recipients thus chosen were approved.

There being no further business, the meeting was adjourned at 4:50 p.m.

COLLEGE OF NURSING

Gwen Lee (Assoc Prof) participated in a workshop on "Curriculum Evaluation for Today and Tomorrow" held by the National League for Nursing in Miami, Fla. on March 7-8.

Gwen Lee is serving as a Consultant to the College of Nursing at the Medical University of South Carolina on a project "Intensive Clinical Course in Neonatal Care" through June 1974.



## AGRICULTURAL EDUCATION

Earl T. Carpenter (Prof and Hd) delivered a paper on "Articulation of Instruction for Junior High, Senior High and Post Secondary Programs" at the Southern Agricultural Education Conference. The conference was held at Hot Springs, Ark., March 3-6.

Earl T. Carpenter served as a member of the Policy Committee of the Agricultural Education Division of the American Vocational Association at St. Louis, March 6-8.

John H. Rodgers (Prof) delivered a paper on "The Preservice Preparation of Instructors for Adult Education in Agriculture" to the National Seminar for Leaders of Young Farmer and Adult Education Programs in Agriculture. The seminar was held in Kansas City, Mo., March 18-21. Dr. Rodgers also served as Keynoter to the Task Force on Teacher Education.

## CHEMISTRY

Papers presented at the annual meeting of the South Carolina Academy of Science, Coker College, Hartsville, March 28-30:

J. C. Fanning (Prof), J. J. Jen (Asst Prof, Food Sci) and Alfreda Mouchet (Winthrop College), "Iron Pheophytin, the Iron Analog of Chlorophyll."

H. G. Spencer (Prof), "Copolymerization Rates as a Function of Monomer Ratio."

## COLLEGE OF EDUCATION

H. F. Landrith (Dean) addressed the North Carolina Association of Classroom Teachers at their annual meeting at Pembroke State University on March 5-6.

H. F. Landrith conducted workshops on the Defined Minimum Program at the annual convention of the South Carolina Association of Classroom Teachers meeting in Charleston on March 15-16.

H. F. Landrith served as chairman of the Southern Association of Colleges and Schools committee visiting Belton-Honea Path High School on March 11-13.

Aerospace Studies Major Alton C. Brock (Asst Prof) developed a management case study exercise for the March-April issue of the Air Force Education Journal.

## CONTINUING ENGINEERING EDUCATION

The Sixth Annual International Biomaterials Symposium will be held on the Clemson University Campus beginning Friday, April 19 and continuing through Wednesday, April 24.

Over 300 of the worlds' leading bioengineers and orthopedic surgeons who are active in research for reconstructive surgery will attend. Approximately 100 research papers will be presented. The attendees will represent 30 or more states and 15 to 20 foreign countries.

This year's theme is "The Selection of Materials for Reconstructive Surgery," that is, the assessment of current needs and recent developments in materials for plastic, reconstructive and maxillofacial surgery. Because of their similar problems and hopefully interadaptable solutions the allied areas of orthopedic and dental materials will also be included. Other types of transdisciplinary interaction are being encouraged by the inclusion of sessions on the design and development of prosthetic and orthotic devices based on the new materials, and sessions dealing with clinical experience in the use of these materials and devices.

Such crossfertilization between related clinical specialties and between basic and clinical researchers has come to be a hallmark of the Clemson Symposia.

The Symposium Administrative Staff will include F. W. Cooke (Assoc Prof and Hd, Div of Interdisciplinary Studies), J. K. Johnson (Assoc Prof and Dir of Cont Eng Ed), D. D. Moyle (Asst Prof, Bioengr and Materials Engr), and Allan M. Weinstein (Asst Prof, Bioengr and Materials Engr).

The Authors will include from the bioengineering faculty of Clemson University, F. W. Cooke, J. J. Klawitter (Asst Prof), D. D. Moyle, B. W. Sauer (Asst Prof) and A. M. Weinstein (Asst Prof).

## COLLEGE OF ARCHITECTURE

Joseph Young (Prof) hosted a meeting of the Committee of Architecture for the Arts and Recreation at Hilton Head Island, Apr. 24-25. Professor Young also installed the Alpha Gamma Chapter, Tau Sigma Delta, National Honor Society for Architecture and Allied Arts, Kent State University, Kent, Ohio on March 8.

Michele G. Melaragno (Assoc Prof) was the guest speaker for the evening and for a discussion session the following day at the Summer Institute on "Protective Design" at the University of Washington, Seattle, Wash., July 29 - August 17, 1973. On this occasion a paper entitled, "Tornado Engineering" was presented. The Summer Institute was organized by the American Society for Engineering Education and the Defense Civil Preparedness Agency.

Tom Turner (Instr) has been selected to exhibit in a National Invitational at Madison, Wis., sponsored by the National Council on Education for the Ceramic Arts. The show is composed of 26 ceramic artists from the United States and Canada and will travel to the Museum of Contemporary crafts in New York during May. The show opens on March 28 at the University of Wisconsin, Madison.

## CIVIL ENGINEERING

Parviz F. Rad (Asst Prof) presented a paper entitled, "Performance of Tunnel Boring Machines in Underground Excavation Operations," at the annual meeting of the South Carolina Academy of Sciences on March 29.

Parviz F. Rad was awarded a \$17,000 Research Initiation Grant by the National Science Foundation for a project entitled "Improved Mechanical Tunnelling Performance Indicators for Drag Bits and Rolling Studded Cutters."

J. Edwin Clark (Assoc Prof) presented a paper entitled, "Charleston's Signal System -- Existing System and Economic Benefits" at the annual meeting of the Southern Section of the Institute of Traffic Engineers in Charleston, March 17-21.

J. Edwin Clark was also a participant on a panel entitled "Transportation and Equipment Needs" at the Second Annual Emergency Medical Services Seminar held in Charleston on Feb. 12-13.

A. G. Law (Assoc Prof) has been awarded a \$25,000 two-year contract with the South Carolina State Highway Department for preparation of "South Carolina Highway Drainage Design Manual." The purpose of the study is to review drainage design practices to assure economical as well as efficient and safe design.

## ECONOMICS DEPARTMENT

Janet J. Glocker (Instr) participated in a conference entitled, "Women in Management," at Georgia State University in Atlanta, March 27-29.

Robert F. Hebert (Asst Prof) discussed a paper entitled, "The New Economics of Kenneth Boulding" at the Southwestern Social Science Convention in Dallas, Texas, March 28-30.

Paul Zipin (Asst Prof) and Carl Dyer (Assoc Prof, Ind Mgt) presented a paper entitled, "The Elasticity of State Expenditures in Selected Southeastern States," at the May 30th meeting of the South Carolina Academy of Science.

Paul Zipin and Carl Dyer presented a paper at the Southern Region Science Association Meeting in Washington, D.C. on April 4. The title of the paper was "An Economic Analysis of the Impact of Tax Elasticity in the Fiscal Capacity of Selected Southeastern States."



### ELEMENTARY AND SECONDARY EDUCATION

William W. Pennscott (Assoc Prof) served as workshop consultant with teacher and staff involved in Project COPE (Career Oriented Program of Electives) at Berea High School.

Thomas H. Parry (Assoc Prof) presented two papers, "Ethical Considerations for Career Development in the Secondary Schools," and "The Counselor and School Records: Ethical and Legal Considerations" at the South Carolina Personnel and Guidance Association Convention held at Myrtle Beach, March 22-23.

James E. Matthews (Assoc Prof) presented a talk at one of the individual interest sessions of the Spring Program of the South Carolina Personnel and Guidance Association at Myrtle Beach on March 23. The topic was, "The Principal-Counselor Relationship with Respect to School Records."

James E. Matthews spoke at the spring meeting of the Greenville County Counselors Association on March 26. The topic was "Legal Aspects of Counseling."

Oliver R. Lumpkin (Assoc Prof) served as chairman of a seminar group at the Annual Convention of South Carolina Personnel and Guidance Association, March 22-23, Myrtle Beach. The seminar concerned itself with: "Research, the Counselor, and Instructional Programs for Today's Schools."

Oliver R. Lumpkin presented a paper at the Annual Convention of the South Carolina Personnel and Guidance Association, March 22-23, Myrtle Beach. The presentation was titled: "The Counselor Gathers and Analyzes Data for Instructional Purposes in Today's Schools."

Kenneth Peden (Asst Prof) presented a paper at the Annual Convention of the South Carolina Personnel and Guidance Association, March 22-23, Myrtle Beach. The presentation was titled: "Educational Implications for Career Development in the Secondary Schools."

### ELECTRICAL AND COMPUTER ENGINEERING

J. N. Gowdy (Asst Prof) has received a \$17,000 National Science Foundation Research Initiation Grant to design and implement an interactive computer based system for teaching reading. The grant period is for twenty-four months beginning April 1, 1974.



## EXTENSION HOME ECONOMICS

Frances Jordan (Assoc Prof) attended the annual meeting of the Southeastern Council on Family Relations held at Tuscaloosa, Ala., March 17-19. She is first vice president of the organization, which discussed Business-Industry and Its Impact on the Family.

## ENVIRONMENTAL SYSTEMS ENGINEERING

John F. Andrews (Prof) has been elected a Fellow of the Royal Society of Health.

John F. Andrews participated, as a delegate from the International Association on Water Pollution Research, in a Symposium on the Use of Computer Techniques and Automation for Water Resources Systems, State Department, Washington, D.C., March 26-27. The Symposium was jointly sponsored by the Economic Commission for Europe (UN), State Department (US), and the Water Resources Council (US).

L. G. Rich (Prof) has been appointed by Governor John C. West to the South Carolina Advisory Committee on Science and Technology. The committee, which is composed of thirteen members selected from private enterprise, academic institutions, and governmental agencies, has the responsibility for bringing together state government, the business community and the academic community for the purpose of providing solutions which can be effective in providing for a more orderly technological development of South Carolina.

## GEOLOGY

George M. Haselton (Assoc Prof) presided over a technical session at the Annual Meeting of the South Carolina Academy of Science, Coker College, Hartsville, March 28-30, and presented a paper entitled, "Talus Along North Prong of Shining Creek, North Carolina."

George M. Haselton has published the following article in Southeastern Geology, Vol. 15, No. 3, pp. 119-125, 1973 (Dec.), "Possible Relict Glacial Features in the Black Balsam and Richland Balsam Area, North Carolina."

## INDUSTRIAL MANAGEMENT

Gerald Waddle (Asst Prof) will be initiated into the Beta Gamma Sigma, National Honor Fraternity in Business Administration, at the University of South Carolina on April 18.

Robert F. Zant (Asst Prof) addressed the March 11, 1974 meeting of the Industrial Crescent Chapter of the American Production and Inventory Control Society. The topic of his talk was "Forecasting Techniques."

Richard V. Calvasina (Asst Prof) passed the CMA exam given by the National Association of Accountants, Dec., 1973.

E. Earl Burch (Asst Prof) and William R. Henry, Georgia State University, had their article, "Institutional Contributions to Scholarly Journals of Business," published in the current (January) issue of the Journal of Business.

E. Earl Burch and William Henry had their article, "Production Management is Alive and Well," published in the Academy of Management Journal, Vol. 17, No. 1, March 1974.

## INTERDISCIPLINARY STUDIES

A. M. Weinstein (Asst Prof), J. J. Klawitter (Asst Prof) and L. Peterson (Asst Prof, Oral Surg, Medical College of Ga) presented a paper entitled, "Prosthetic Polymethylmethacrylate Teeth Designed for Attachment by Tissue Ingrowth" at the 52nd General Session of the International Association for Dental Research in Atlanta, March 21-24.

M. Spector (Asst Prof) presented a paper entitled "High Resolution Electron Microscopy of Crystallites in Human Calcified Tissues" at the 52nd General Session of the International Association for Dental Research at Atlanta, March 21.

J. S. Wolf (Assoc Prof) has received a one-year contract renewal from Warner-London, Inc., in the amount of \$52,342 for a proprietary study dealing with materials development.

## LANGUAGES

Harry E. Stewart (Prof and Hd) delivered a paper, "College-High School Foreign Language Articulation in South Carolina," at the spring meeting of the South Carolina Conference of Foreign Language Teachers held at Presbyterian College on March 30.

Harry E. Stewart was recently elected President of the S. C. Chapter of the American Association of Teachers of French.

LANGUAGES (Continued)

Gaston J. Fernandez (Assoc Prof of Spanish) participated as panelist in the panel discussion on "Bilingualism: A New Trend" presented by Dr. Ricardo Ramirez (Wofford College) at the meeting of the South Carolina Chapter of the American Association of Teachers of Spanish and Portuguese, at Presbyterian College, Clinton on March 30.

MATHEMATICAL SCIENCES

James A. Reneke (Assoc Prof) has had the following article published recently: "Product integral solutions for hereditary systems," Trans. Amer. Math. Soc., 181(1973), p. 483.

Thomas G. Proctor (Assoc Prof) has had the following article published recently: "Perturbed nonlinear differential equations," Journal Math. Anal. and Appl., Vol. 45, No. 3, March 1974, p. 777.

MECHANICAL ENGINEERING

Eugene Harrison (Prof) has been awarded a six-month \$8,400 contract with Celanese Plastics Company to cover investigations in plastics extrusion.

PHYSICS AND ASTRONOMY

F. J. Keller (Assoc Prof) presented a paper entitled, "Energy Sources for the Future" at the S. C. Academy of Sciences meeting at Hartsville, March 29-30.

F. J. Keller had a paper published in Physics Letters A, Vol. 46, No. 6, Jan. 28, 1974, entitled, "Possible Isotope Effect on Frenkel Defect Production in Ionic Crystals."

A. L. Laskar (Assoc Prof) and W. J. Mealing (Grad Stu) presented a paper entitled, "Vacancy Mechanism of Diffusion of Iron in Silver Bromide" at the American Physical Society meeting held at Philadelphia, March 25-28.

A. L. Laskar, D. L. Foster and W. J. Mealing presented a paper entitled, "Diffusion of Iron Tracer in Silver Chloride" at the American Physical Society meeting held at Philadelphia, March 25-28.

A. L. Laskar, D. L. Foster and K. A. Wagner (Grad Stu) presented a paper entitled, "Schottky Defects in Potassium and Rubidium Azides" at the American Physical Society meeting held at Philadelphia, March 25-28.

### PHYSICS AND ASTRONOMY (Continued)

M. G. Miller (Assoc Prof) presented a paper entitled, "Defects Production in Vanadium by Low Energy Electron Irradiations" at the S. C. Academy of Sciences meeting at Hartsville, March 29-30.

### OFFICE OF PROFESSIONAL DEVELOPMENT

Robert L. Brown (Visiting Lect, Ind Mgt) will be chairman for a course entitled "Practical Skills in Managing People," April 16-17. The course will be held in Sirrine Hall and will be sponsored by the Department of Industrial Management.

William B. Barlage, Jr. (Prof of Chem Engr) and William F. Beckwith (Assoc Prof of Chem Engr) will be the Co-Chairmen for a course, "Polymer Flow: Extrusion and Spinning," May 13-15. The course will be held in the DeFore Room of the College of Industrial Management and Textile Science.

### RECREATION AND PARK ADMINISTRATION

At the American Camping Association National Convention recently conducted in Atlanta, the Department of Recreation and Park Administration received one of five National Recognition Awards for its Camping Program for Senior Citizens. The project is directed by C. R. White (Asst Prof).

### TEXTILE DEPARTMENT

E. S. Olson (Assoc Prof) gave a lecture entitled "Dye Structure Contributions to Dyeing," on March 9 at the ACS Seminar, Furman University.

John J. Porter (Assoc Prof) and Eric Snider (Grad Stu, Chem Engr) co-authored a paper entitled, "Ambient Atmospheric Total and Non-Methane Hydrocarbons in the Southeast Rural and Urban Areas." Dr. Porter presented the paper on March 28 at the Fourth Annual Industrial Air Pollution Control Conference in Knoxville, Tenn.

E. I. Stearns (Prof and Hd) wrote an article, "Measurement of Color and Color Differences" which appeared in two parts in the February and March issues of the Textile Chemist and Colorist.



CALENDAR OF CAMPUS EVENTS

- 15 -- Spanish Film: Sponsored by the Department of Languages, Daniel Auditorium, 7 p.m. Open to the public, admission free.
- 15-29 -- Exhibition: Pots and Painting from Mercer University, Macon, Georgia. An exhibit of ceramics and watercolors from two Mercer University faculty members, Sam Hutto, Painter; Elmer Taylor, Potter. Also an exhibit by Jamie Davis, Clemson M.F.A. Candidate in Ceramics. Rudolph Lee Gallery, College of Architecture. Gallery open 9 - 4:30 p.m. weekdays.
- 16 -- Chemistry Seminar: Sponsored by the Chemistry Department. C. G. McCarty, West Virginia University, "Chemistry of N-cyanoimines," 131 Brackett Hall, 4:30 p.m.
- 17 -- Fort Hill Clemson Club Ladies Nite, Social Hour, 6 p.m.; Buffet, 7 p.m., Clemson House. Open to the public, Tickets (\$5 each) may be purchased at the Alumni Center, Jervey Athletic Center, and Lynch Drug Company.
- 17 -- Tennis: University of South Carolina at Clemson, 2 p.m.
- 19 -- Southeastern Intercollegiate Livestock Evaluation Contest, sponsored by the Department of Animal Science, Block and Bridle Arena, 7:30 a.m. Open to the public, admission free.
- 19 -- Baseball: Virginia at Clemson, 3 p.m.
- 19 -- Military Banquet, Harcombe Dining Hall, 7 p.m.  
Military Ball, National Guard Armory, 9 p.m. (This is a correction, the banquet and ball were rescheduled.)
- 20 -- Southeastern Intercollegiate Livestock Selection Contest, Block and Bridle Arena, 7:45 a.m. Sponsored by the Department of Animal Science. Open to the Public, admission free.
- 20 -- Dental Aptitude Test, M101 Martin Hall, 8 a.m.
- 20 -- Baseball: Wake Forest at Clemson, 3 p.m.
- 20-24 -- Sixth Annual International Biomaterials Symposium, sponsored by Division of Interdisciplinary Studies, the National Institute of Dental Research, and the S.C. Regional Medical Program. Clemson House. Expected enrollment, 300 plus.
- 21 -- Baseball: N.C. State at Clemson, 3 p.m.
- 21 -- Fine Arts Film Series: "Rashomon," Japanese director Akira Kurasawa's film about the nature of truth which won the Grand Prize at the Venice Film Festival in 1951. Presented by the Clemson University Union. Holtzendorff YMCA, 8 p.m. Open to the public, admission free.
- 23 -- Tennis: University of Maryland at Clemson, 2 p.m.
- 23 -- Lecture and Discussion: Dr. Theron Price, Furman University, "The Early Church and Its Impact on Society," 188 Brackett Hall, 7:30 p.m.

- 24 -- Speaker's Bureau: Jim McKay, ABC Wide World of Sports announcer, "My Wide World" Tillman Hall Auditorium, 8 p.m. Open to the public, admission free.
- 24 -- Nursing Lecture: Mary Wagner, Assistant Professor of Nursing, "Emergency Care of Burned Patients" Anderson Memorial Hospital, 1:15 p.m.
- 25 -- Clemson University Concert Band "Pops" Concert, Sponsored by the Department of Music, Tillman Hall Auditorium, 8 p.m. Open to the public, admission free.
- 25-28 -- Baseball: ACC Tournament at Raleigh, N.C.
- 25-27 -- Tennis: ACC Tournament at Clemson, 9 a.m.
- 27 -- Graduate Record Examination, M101 Martin Hall, 8 a.m.  
Advanced Graduate Record Examination, M101 Martin Hall, 1:30 p.m.
- 27 -- Second Annual Blue Ridge Invitational Art Festival featuring artists from the Carolinas and Georgia. \$1,000 in prizes will be awarded and works will be for sale. Sponsored by the Blue Ridge Art Association. Clemson House lawn, 10 a.m. - 6 p.m. In the event of inclement weather, will be held in the Clemson House. Open to the public, admission free.
- 28 -- Second Annual Blue Ridge Invitational Art Festival continues. Clemson House lawn, 1 - 6 p.m.
- 29 -- Exams Begin.

### PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 17

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May 1, 1974

APR 29 1974



President Robert C. Edwards presents Algernon Sidney Sullivan Medallions to Prof. Everett Laitala of Clemson, retired former head of the University's Engineering Services Department, and Clemson seniors Janet L. Bridges of Greenville and John S. Pratt of Granville, Ohio.

## Over 2,700 Clemson Students Recognized At Honors and Awards Day

More than 2,700 Clemson students were cited for superior scholastic achievement and excellence in non-academic areas during Honors and Awards Day ceremonies April 10.

Student recipients of the top non-academic award, the Algernon Sydney Sullivan Medallion given for outstanding service to the University, were senior electrical engineering major John S. Pratt of Granville, Ohio, and senior mathematics major Janet L. Bridges of Greenville.



Non-student recipient of the Sullivan award was Prof. Everett Laitala of Clemson, former head of the Engineering Services Department and professor of industrial engineering who retired last December after 15 years at the University.

The Trustees Medal, awarded annually by the Board of Trustees to the best speaker in the student body, went to Frank B. Adams III, sophomore administrative management major from Seneca.

Sara E. Cromer of Seneca, senior mathematics major, received the highest academic award for women, the American Association of University Women Award, given annually to the coed who will graduate with the highest grade-point-ratio. She has compiled a perfect 4.0 grade average.

The Phi Eta Sigma Award for the male senior with the highest scholastic average went to Arvyn B. Watson Jr., physics major from Shreveport, La., also with a 4.0 grade average.

Cromer and Watson also won the Phi Kappa Phi Awards, which are given to juniors or seniors with the highest scholastic averages.

### 15 Clemson Faculty Members Named Outstanding Educators

Fifteen members of the Clemson faculty have been named Outstanding Educators of America for 1974. Nominated earlier this year for this national recognition, they were selected on the basis of their professional and civic achievements.

They are R.W. Henningson, Assistant Dean, University Research; Marvin A. Owings, Head, Dept. of English; Robert T. Benson, Director, Vocational Education; William E. West, Associate Professor, Industrial Education; Farrell B. Brown, Assistant to the Graduate Dean; Leon Roswal, Director, Associate Degree Program, College of Nursing; Gwendolen Lee, Associate Professor, College of Nursing; B.E. Gilliland, As-

sistant to the Dean, College of Engineering; and M. Wolla, Professor, Dept. of Electrical and Computer Engineering.

Also, Julius C. Hubbard, Professor, Dept. of Textiles; R.D. Shannon, Associate Professor, Dept. of Economics; Elizabeth B. Galloway, Assistant Professor, Dept. of Education; J.F. Allen, Associate Professor, Dept. of Chemistry; John W. Kenelly, Head, Dept. of Mathematics; and W. Robert Boland, Associate Professor, Dept. of Mathematics.

Outstanding Educators of America is an annual awards program honoring distinguished men and women for their exceptional service, achievements, and leadership in the field of education.

Each year, those chosen Outstanding Educators are featured in the national awards volume -- "Outstanding Educators of America."

Nominations for the program are made by the officials of colleges and universities including presidents, deans and department heads. Their selection guidelines include an educator's talents in the classroom, contributions to research, administrative abilities, civic service and professional recognition.

### New Award in German Language Study Announced

A new award to recognize outstanding scholastic achievement in German language study at Clemson University has been established by a Pendleton textile manufacturer.

The "Jan Kleinenwefers Award for Excellence in German" was created by B-K Textile Machinery Corp., a German firm which has manufactured textile finishing machinery at Pendleton for several years.

First recipient of the annual award is James Robin Smith, a Clemson senior from Clinton who has a 3.9 grade-point-ratio in his German Studies.



Siegfried Poser, president of the Pendleton company, presented a \$100 check to Smith. The award is the first of its kind in the Department of Languages at Clemson.

The award is named in honor of the president of Kleinewefers Industrie-Companie GmbH in Krefeld, West Germany, the parent firm of the South Carolina plant. Jan Kleinewefers played a major role in settling B-K Textile Machinery Corp. in this area.

#### MINUTES OF THE UNDERGRADUATE COUNCIL, MARCH 15, 1974

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Arline Duvall, Ralph W. Gilchrist, Jerome V. Reel, Malcolm J. Skove, Edward A. Vaughn, and Kenneth N. Vickery.

The minutes of the March 1, 1974, meeting were approved as distributed.

#### College of Forest and Recreation Resources

The following course was approved:

RPA        390    Special Projects in Recreation and Parks    1 cr (1 and 0)

Dean Green stated that action on the Class Attendance Policy would be deferred until the April meeting.

The report of the ad hoc committee on General Education Requirements at Clemson University and the Distinction Between the B.A. and B.S. Degrees was presented by Professor Reel. (A copy of the report is attached.) Following discussion of the recommendation on General Education Requirements there was a motion that the report be accepted as information, that it be endorsed in principle, and that the report be referred to the various college curriculum committees for consideration prior to the Council's taking action on the recommendation.

There was a second to the motion; the motion was approved.

Professor Reel presented a recommendation that the Bachelor of Arts degree may be conferred by those colleges and departments that require that four (4) courses be taken in a foreign language. The recommendation was approved by a vote of seven (7) to three (3).

A report from the Committee to Study the Clemson University Grading System for Undergraduates was distributed by Dean Vickery.

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974

President Fulton called the meeting to order at 4:17 p.m. With the approval of the Senate's Advisory Committee, President Fulton invited Professor John E. Stinton of the University of South Carolina to attend the meeting. Professor Stinton is a member of the U.S.C. Fringe Benefits Committee and was U.S.C.'s representative on the South Carolina Council of Presidents Committee to Investigate TIAA-CREF and S. C. Retirement System Faculty Retirement Benefits. He is also a coauthor of "A Comparison of University Retirement Plans."

President Fulton recommended some modifications in the wording on pages 2 and 5 of the Minutes of the Senate's Feb. meeting. Professor Roberts moved that the Minutes be adopted as circulated incorporating President Fulton's recommended changes. The motion passed.

President Fulton then introduced Professor E. L. McLean, Clemson University's representative on the South Carolina Council of Presidents Committee to Investigate TIAA-CREF and SCRS Faculty Retirement Benefits. Professor McLean noted that the committee had been established in August 1973 at the suggestion of President Edwards. This suggestion had resulted partially from the report the Clemson University Ad Hoc Committee on Retirement published in April 1973 and from concern regarding this topic expressed by the Faculty Senate. Professor McLean reported that the Council of Presidents Committee comprised six members and had met three times. The committee had talked with not only a representative from TIAA-CREF but also the Executive Director of the South Carolina Retirement System. In the opinion of the latter, Professor McLean stated, an option such as TIAA-CREF for faculty members at public colleges and universities would not be desirable in South Carolina. His opinion was based on the belief that if one group received such options, others would want them too. Nonetheless, Professor McLean stated, the committee had recommended in its report of January 1974 to the Council of Presidents that legislation be enacted to grant optional retirement systems to college and university faculty members (e.g., participation in the SCRS or in TIAA-CREF).

Professor Dillon asked why the committee had recommended that the period before a policy is vested in the holder be reduced from 15 years to only 10 rather than 5 years. Professor Stinton responded that that had been recommended by the South Carolina Education Association and represented a compromise between 15 years and 5 years. Professor Stinton also noted that in North Carolina one of the first steps in enacting legislation was to appoint a legislative study to evaluate retirement systems. He recommended that the Council of Presidents, respective boards of trustees, and other official groups in the colleges and universities in South Carolina cooperate in advocating such legislative action in South Carolina.

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

Professor Beckwith inquired about the suitability of the investments undertaken with the South Carolina Retirement System funds. Professor Stinton noted that the State Treasurer manages the investment of these funds and that the results recently have improved substantially. He said that there is now about \$700 million in the fund, earning about 6% per annum. He pointed out, however, that much of the money is invested in tax exempt bonds, and that such a policy is unsound because the retirement system is tax exempt anyway. Professor Stinton suggested that such investments amount to a subsidy by participants in the state retirement system to taxpayers in certain political entities which issue the bonds. Professor McLean also noted that the SCRS is not subject to any external audit (outside the State Treasurer). He concluded by noting that the Council of Presidents will consider this topic at their March meeting.

President Fulton thanked both Professor McLean and Professor Stinton for their informative reports.

President's Report

President Fulton began his report by describing the decisions made by the University Administration regarding various Resolutions passed by the Senate during the past year.

April: In response to two Resolutions of Appreciation, President Edwards had sent letters of appreciation to the donors of the Hunter Endowed Chair in Bioengineering and to Mrs. F. Marshall Jordan for the bequest of the late F. Marshall Jordan of a sum of money to be used in the construction of a biological sciences building, Jordan Hall. President Edwards had received responses which President Fulton read to the Senate.

May: Three of the seven Resolutions passed by the Faculty Senate in May involved matters internal to the Senate. One commended the Ad Hoc Faculty Committee on Retirement. The outcome of the RESOLUTION OF ANNUAL LEAVE (VACATION) FOR 12-MONTH FACULTY (FS-73-5-3) is still pending. The RESOLUTION ON REDFERN (FS-73-5-6) was rejected. President Fulton reported that Redfern has had to hire a fourth physician due to the present student load at the health center. Since this is a student fee funded facility, the Administration is unwilling at this time to extend the services of Redfern to the faculty.

June: The RESOLUTION ON OPTIONAL FINAL EXAMINATIONS (FS-73-6-1) was rejected by the Undergraduate Council, and the Senate's Admissions and Scholarship Committee was unwilling to recommend any new form of the Resolution. The RESOLUTION PRESCRIBING GPR FOR GRADUATES IN MAJOR (FS-73-6-2) was passed by the Undergraduate Council and recommended to Dean Hurst. It must still go to the Educational Council.



MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

Dean Hurst has asked the College Deans for comment. Regarding the RESOLUTION ON THE HONOR SYSTEM (FS-73-6-4), President Fulton said that the matter of an honor system for the university is still in the formative stages. Other June Resolutions were internal or related to matters discussed at other points in the Senate meeting.

July: The RESOLUTION ON FACULTY MEMBERSHIP ON THE LANDSCAPE AND SITE DEVELOPMENT COMMITTEE (FS-73-7-2) was approved. A member to represent the Faculty Senate will be appointed July 1. However, the RESOLUTION ON PUBLICATION OF PLANS BY THE PLANNING COUNCIL (FS-73-7-3) was rejected.

August: The FACULTY OMBUDSMAN RESOLUTION (FS-73-8-2) was rejected by the Administration on the grounds that Faculty Senators should act as ombudsmen for their colleges and that the Senate President should function or serve in such a capacity for the faculty as a whole.

September: The RESOLUTION ON UNIVERSITY COMMITTEE MEETINGS (FS-73-9-2), the RESOLUTION CONCERNING APPOINTMENT TO UNIVERSITY COMMITTEES (FS-73-9-3), and the RESOLUTION ON ANNUAL SALARY INFORMATION (FS-73-9-7) were all approved. The RESOLUTION ON THE FACULTY SENATE PRESIDENT'S BUDGET (FS-73-9-4) was rejected; however, Dean Hurst's office will supply operating funds, if needed, to the Senate President's college department. Moreover, the Senate President may make use of secretarial help in the office of the Dean of the University.

October: The RESOLUTION ON DUPLICATION OF COURSES AND PROGRAMS (FS-73-10-1) was approved with the request that faculty involved in such duplication should provide information to the Faculty Senate.

December: The RESOLUTION OF APPRECIATION (FS-73-12-1) resulted in a letter of appreciation from President Edwards to Mr. and Mrs. J. Wilson Newman. Mr. Newman's response was read to the Senate.

January: Regarding the RESOLUTION ON HOUSING (FS-74-1-1), President Fulton referred to a memorandum from Mr. Henry Hill to Dean Hurst, copies of which had been distributed to the Senators. President Fulton noted that the memorandum amounted to a rejection of the Resolution.

February: Regarding the RESOLUTION ON INTERPRETATION OF LEAVE FOR NINE-MONTH FACULTY (FS-74-2-1), President Fulton stated that Dean Hurst found nothing with which he disagreed but that he would not make a final judgment on the Resolution until he had received comments which he has solicited from the academic deans. The RESOLUTION: SMOKING BAN IN LITTLEJOHN COLISEUM (FS-74-2-2) was adopted for the last two home basketball games and will be in practice in the future.



MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

The Resolution regarding a Research Council, President Fulton said, would be taken up later in the meeting. The COMMITTEE CONSOLIDATION RESOLUTION (FS-74-2-4) will go into effect July 1.

Resolutions to establish committees on the Motor Pool (FS-73-5-5), the Advisory Committee for the Student Relations Committee (FS-73-6-5), Faculty Work Loads (FS-73-6-7 and FS-73-7-1), Faculty Evaluation of Academic Administrators (FS-73-9-5), and the Continuing Education Center (FS-73-11-1) had all been adopted. The Report on the Student Relations Committee was given at the February meeting.

Turning to other matters, President Fulton reported that on Feb. 14 he had met with Mr. David Glocker, Chairman of the Graduate Student Association. He had recommended that the GSA seek an appropriation of funds from the Vending Machine Committee for use by the graduate student organizations.

At the meeting of the Planning Council on Feb. 19, President Fulton reported, the University Master Planner, Professor Eflin, had submitted a plan, based on that presented by a student, Rodney Sprott, for inner campus bicycling. This plan must be approved by the Executive Officers and then go to the Physical Plant for implementation. The Council also discussed a bicycle code under which all bikes must be registered. Student Body President John Pratt had opposed such a policy. Finally, the Council had discussed the matter of faculty parking. Over 250 parking spaces will be lost on East Campus this fall. To provide additional spaces, the Council discussed the feasibility of utilizing the following areas for employee parking: student spaces along Palmetto Boulevard; the area in front of Long Hall; and the area immediately to the west of Mrs. Poole's house.

On Feb. 28, Pres. Fulton had met with Dean George Coakley to discuss details of the proposed honor system. Dean Cox had requested Dean Coakley to consider procedures in such a system. After discussing the matter at length, President Fulton said he had suggested to Dean Coakley that the Faculty Senate should be given an opportunity to consider any final version before an honor system is approved for the university.

President Fulton reported that at the meeting of the Undergraduate Council on March 1 a computerized evaluation of faculty by students was approved in principle. Wording still has to be approved by the Council, President Fulton said, and there are still problems relating to confidentiality and computerization which must be ironed out.

Professor Beckwith suggested that such an evaluation would be futile. He said he believed that written comments by students are more useful. It was pointed out that space for narrative form comments was intended by the Council to be

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

provided on the forms for student evaluation of faculty. Professor Bauld inquired whether or not, if teaching was to be considered so important, the University would be willing to release time so that faculty members can improve their teaching ability. Professor Steirer asserted that it was a bad precedent for such a proposal for faculty evaluation to emanate from the Undergraduate Council. He asserted that reflections of Faculty Senators on such a matter should have been heard. President Fulton noted that only rarely is the Senate asked for reaction to new ideas, and he admonished the new Senate to keep abreast of proposals developing in the University and to express the voice of the faculty on these proposals before they become established University policy.

President Fulton said that the Undergraduate Council had also considered the matter of course duplication. President Fulton stated the conflicts regularly arise before the Council when new courses are proposed. The Council, he said, routinely urges parties to the conflicts (i.e., department heads) to attempt to resolve such problems themselves.

The Educational Council at its meeting on March 4 had passed the proposal establishing a new language requirement for the Ph.D. However, President Fulton reported, he had not voted on the proposal since the Faculty Senate had not had an opportunity to scrutinize it. President Fulton also referred to "A Survey of the Computerization of Management Information Systems and Recommendations for Their Expansion Within Public Colleges and Universities of South Carolina," prepared by Charles A. Brooks, Jr., Director of MIS Computerization for the South Carolina Commission on Higher Education. He noted that the report mentioned possible refinement of the CHE appropriations formula. He said that member colleges had been asked for comments on the report. President Edwards had told the Council that the University will develop its own MIS system for use in planning and will cooperate fully with the state-level concept of CHE.

President Fulton reported that on Feb. 13 a group from Columbia, including officials of industry and some newsmen, toured the University. They were shown what the University is doing for industry and introduced to the Continuing Education program.

At the AFSC meeting on March 5, President Fulton reported, approval was granted to a modified version of the Class Attendance Policy. This version had been proposed for consideration by the Undergraduate Council by a subcommittee of the Undergraduate Council.

Finally, President Fulton reported that the Graduate Council at its meeting on March 8 had approved the "W" policy to replace the "WP-WF" policy which is still in effect for graduate students. Also, the Council had considered a policy whereby "All on-campus University employees may satisfy residence

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

requirements by completing fifteen (15) semester hours of graduate credit during a twelve months period."

Committee Reports

The chairman of the Admissions and Scholarship Committee, Professor Steirer, introduced a RESOLUTION: PROPOSED CLASS ATTENDANCE POLICY (FS-74-3-1):

- (1) Regular and punctual attendance at all class and laboratory sessions is the responsibility of each student. College work proceeds at such a pace that regular attendance is necessary in order for each student to obtain maximum benefits from instruction. All absences are matters to be resolved between the instructor and the student. In the event a student absences himself from a class for a reason considered valid by the instructor, it is the student's responsibility, with the cooperation of the instructor, to make up resulting deficiencies.
- (2) Students desiring to withdraw from a class must secure a drop card from the Registrar's office prior to terminating attendance. A student who incurs excessive absences may be dropped from a course.
- (3) Students shall have protection through orderly procedure against prejudicial or capricious academic evaluation. No faculty member or administrator shall consider it his prerogative to go beyond this attendance policy. Students whose academic freedoms may have been abridged have the right to seek redress.
- (4) A student enrolled at the commencement of the last five weeks of classes shall have final grades recorded.

Although in support of the Resolution, Professor Steirer expressed regret that the policy emanated from the Undergraduate Council rather than the Faculty or Student Senates. In response to a question from Professor Bauld, Professor Steirer pointed out that the key sentence is: "All absences are matters to be resolved between the student and the instructor." He noted that experience with the current policy had revealed that students are more mature and faculty members less capricious than previously had been thought. Professor Carpenter pointed out that the revised policy does not require consistency regarding attendance policies among faculty members, but that each individual instructor must treat all his students consistently. Professor Johnston said that he preferred having the matter of absences left up to him and that he understood he should announce what his policy was.

The Resolution passed, 15 to 14.



MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

Professor Steirer then introduced a RESOLUTION ON CONTINUING EDUCATION UNITS (FS-74-3-2):

WHEREAS guidelines have been issued by the Southern Association for Colleges and Universities on Continuing Education Units being accepted for academic credit,

BE IT RESOLVED that the Faculty Senate be recorded as desiring to be consulted before the University establishes a policy concerning academic credit and continuing education units.

The Resolution passed.

Professor Skelton reported that his Policy Committee members had discussed the problem of student parking in faculty zones. Rather than amend the parking code, the Committee members decided that the problems could be alleviated by stricter enforcement of the current code, particularly Sections 2-10 (permitting temporary decals), 6-3 (suspending operating privileges), and 6-7 (requiring impoundment of illegally parked vehicles). Professor Skelton said that he had discussed the situation with Mr. Jim Sullivan of the Office of Student Affairs. Mr. Sullivan had asserted that matters should improve by next August.

Professor Skelton said that consideration of the use of Littlejohn Coliseum for registration would require so much time for investigation that it would have to be referred to the new Policy Committee.

For the Research Committee, Professor Bauld introduced a SUBSTITUTE RESOLUTION ON THE CREATION OF A FACULTY RESEARCH COUNCIL (FS-74-3-3):

WHEREAS some mechanism should be available for the conveyance of Faculty advice to the administration concerning the policies, procedures, and regulations that affect the climate within which both sponsored and unsponsored research is conducted at the University, and

WHEREAS quality graduate programs depend significantly upon the climate created for the conduct of research, therefore,

BE IT RESOLVED that the Faculty Research Committee be dissolved and in its place a Faculty Research Council be created so as to reflect high regard for the role which sponsored and unsponsored research projects play in the total educational process, furthermore,

BE IT RESOLVED that the membership of the newly created Faculty Research Council consist of the Dean of Graduate Studies and University Research; one faculty member from each academic college, nominated by the dean of the college in consultation with the faculty of the college,



MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

and appointed by the Dean of the University for a term of three years; and two students, one undergraduate student nominated by the Student Senate and one graduate student nominated by the Graduate Student Association, each appointed by the Dean of the University for a term of one year. The Dean of Graduate Studies and University Research will serve as chairman and the Assistant Dean of University Research will act as secretary and ex-officio non-voting member, and furthermore,

BE IT RESOLVED that the responsibilities of the newly created Faculty Research Council shall include: advising the administration on all policies, procedures, and regulations affecting sponsored and unsponsored research on the campus; encouraging the Administration in the vigorous solicitation of financial support for University research activities; assuring the general maintenance of an atmosphere of respect for research activities as an essential part of the total educational process; and concerning itself with all other matters of faculty concern related to research.

Professor Bauld pointed out that the only change from the Resolution adopted by the Senate in Feb. prescribing such a Council (FS-74-2-3) was the elimination in the current Resolution of the ex-officio non-voting member from the Office of Business and Finance from the proposed Council. He argued that it seemed preferable for the proposed Council to have, as far as possible, only personnel from the academic realm of the University community.

The Substitute Resolution passed unanimously.

Professor Bauld then said that Mr. Dave Glocker, president of the Graduate Student Association, had requested graduate student representation on a number of University Councils and Committees. The Research Committee had reviewed the request and agreed that it was legitimate. Professor Bauld therefore moved the adoption of a RESOLUTION ON GRADUATE STUDENT REPRESENTATION ON UNIVERSITY COUNCILS AND COMMITTEES (FS-74-3-4):

WHEREAS a primary purpose of the University Councils and Committees is to provide adequate representation from all segments of the University family in the transaction of University business, and

WHEREAS the graduate student population is an important segment of the University family,

BE IT RESOLVED that representation be granted to the graduate student population on the following University Councils and Committees, and that the nomination and appointment procedures of these representatives be in accordance with the criteria appearing below:

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

<u>Council or Committee</u>	<u>Number of representatives and means of selection</u>
Administration-Faculty- Student Council	One graduate student selected annually by the GSA
Graduate Council	Two graduate students nominated by the GSA and appointed by the Dean of the University
Planning Council	President of the GSA, ex-officio
Archives Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Audio-Visual Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Computer Advisory Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Faculty Research Committee	Two graduate students nominated by the GSA and appointed by the Dean of the University
Fine Arts Series Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Library Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Patent Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Poisonous Chemicals and Radioactive Materials Committee	One graduate student nominated by the GSA and appointed by the President

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

<u>Council or Committee</u>	<u>Number of representatives and means of selection</u>
Safety and Fire Prevention Committee	One graduate student nominated by the GSA and appointed by the President
Schedule Committee	One graduate student nominated by the GSA and appointed by the Dean of the University
Traffic and Parking Committee	One graduate student nominated by the GSA and appointed by the President

The Resolution passed.

For the Welfare Committee, Professor Dillon said that his committee's report on tax-sheltered annuities had been completed and that copies were available in departmental offices.

Then, stating that the matter of retirement benefits seemed to require the attention of a separate committee, Professor Dillon moved the adoption of a RESOLUTION ON THE RECONSTITUTION OF THE AD HOC COMMITTEE ON RETIREMENT (FS-74-3-5):

WHEREAS the South Carolina Council of Presidents Committee to investigate TIAA-CREF and SCRS Retirement Benefits has met, and

WHEREAS it was the consensus of the committee that SCRS is deficient with regard to actual monetary benefits for retirees and does not provide a faculty recruitment advantage as other optional retirement plans do,

BE IT RESOLVED that the Clemson University Ad Hoc Faculty Committee on Retirement be reconstituted with the following goals in mind:

- (1) The committee will seek to promote the Optional Retirement Program which may emanate from that Council of Presidents committee.
- (2) The committee will encourage the formation of and work closely with similar committees at other S. C. public colleges and universities.

MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

- (3) The committee will seek improvement in the South Carolina Retirement System for those who will exercise the option to remain in the system in the event of the approval of an optional retirement plan.
- (4) The committee will study various state retirement systems and make comparisons between the SCRS and others employing various hypothetical faculty salary profiles.

The Resolution passed unanimously.

For the Ad Hoc Committee A on the Motor Pool, its chairman, Professor Ezell, reported that no action had been taken on its earlier recommendations. However, since no complaints about the motor pool had reached his Committee, he recommended that it be dissolved.

For Ad Hoc Committee B on Faculty Work Loads, its chairman, Professor Adkins, stated that the problems involved in comparing workloads were more complex than had been anticipated. Thus, the Committee had not completed its work, and Professor Adkins urged that the Committee be reconstituted by the new Senate.

For Ad Hoc Committee C on Faculty Evaluation of Academic Administrators, its chairman, Professor West, made the following report:

- (1) A preliminary evaluation form has been developed, and will be disseminated on a limited basis for review only during the month of March 1974.
- (2) The committee agrees that the evaluation form should be viewed as a self improvement source for the evaluated administrator. Therefore, it is planned that the completed form will be reviewed by the evaluated administrator, and that person makes the decision as to the use of the collected information.
- (3) A recommendation for continuing the Ad Hoc Committee C be forwarded to the 1974-75 Faculty Senate President in order to test and improve the evaluation form and evaluating procedures.

Professor West also stated that his Committee would meet once again prior to the Senate's April meeting, at which time it would make a final report on its progress.



MINUTES OF THE MEETING OF THE FACULTY SENATE, MARCH 12, 1974 (Continued)

For Ad Hoc Committee D on the Continuing Education Center, its chairman, Professor Matthews, reported that the Committee had organized and had decided to consider various faculty concerns regarding the proposed Center. He recommended continuation of the Committee, and he suggested that faculty members with concerns should mention them to members of this committee (himself, V. D. Carmack, J. C. Mullins, and R. D. Shannon).

Professor Cross announced that the University's Traffic and Parking Committee would meet on Thursday, March 14, to discuss the problems of the pedestrian campus.

President Fulton announced that the Senate's Advisory Committee would meet on March 28 at 4:15 p.m. to nominate a slate of Senate officers for the coming year.

Professor Shannon announced that the University Club would have its second social Friday afternoon, March 29, at the Clemson House. Tickets costing \$2.00 each, he said, would be available until March 27.

In closing the final meeting of the current year, President Fulton said: "I take note that this has been a strong Senate and an active Senate. You have faced 'straight on' many hard issues. You have represented responsibly and courageously our fellow faculty members. You are the salt of the earth. You are what makes this place tick and buzz and hum. You are the doers here ... and the creators, and I am proud to have been your servant!"

President Fulton's remarks were greeted with applause by the Senators. Vice President West said that President Fulton richly deserved a round of applause as well, and he got one.

Russell D. Shannon  
Secretary

Member absent: O. J. Jacobus

## I. GENERAL EDUCATION REQUIREMENTS

To be eligible for a bachelor's degree from Clemson University the candidate shall have completed a minimum of forty five semester hours of general education requirements. These will be distributed as follows:

### A. Basic Subjects

(A minimum of four courses and at least ten semester hours with no less than two disciplines represented ).

1. English composition (two courses required)
2. Logic
3. Mathematics
4. Oral Communication
5. Statistics

### B. Natural Sciences

(A minimum of two courses and at least six semester hours selected from the following subject areas).

1. Astronomy
2. Botany
3. Chemistry
4. Geology
5. Physical Science
6. Physics
7. Zoology

### C. Social Sciences

(A minimum of two courses and at least six semester hours selected from the following subject areas).

1. Economics
2. History
3. Political Science
4. Psychology
5. Sociology

### D. Humanities

(A minimum of two courses and at least six semester hours selected from the following subject areas).

1. Foreign Languages
2. Humanities (Including History of Art and History of Music)
3. Literature
4. Philosophy
5. Religion

The remainder of the student's general education requirements depend upon the choice of courses within the limits set by that individual's college or department but within the following two constraints: No more than three courses taken from any of the above disciplines will be considered as general education and at least two of the above categories (A,B,C,D) must be represented.

## II. Distinction between the B. S. and the B. A. degrees.

We recommend that the Bachelor of Arts degree may be conferred by those colleges and departments that require that 4 courses be taken in a foreign language.

MINUTES OF THE UNIVERSITY LIBRARY COMMITTEE MEETING, MARCH 11, 1974

Present: John R. Ray (Chairman), Harriet Crim, Elizabeth B. Galloway, Furman R. Gray, Opal S. Hipps, Gordon E. Howard, Donald B. Stafford, J. W. G. Gourlay (Secretary).

Minutes of the meeting of January were approved as distributed.

Discussion of memorandum from Dean C. B. Green regarding the Library Committee's recommendation concerning borrowing privileges for Emeriti faculty was postponed until the next meeting.

An Ad Hoc Committee to consider revision in library rules was appointed - John R. Ray (Chairman), Harriet Crim, Opal S. Hipps, Gordon E. Howard, and Donald B. Stafford. This committee will meet with members of the library staff.

Mr. Gourlay reported on a recent study he had made on formula budgeting for libraries particularly as this related to Clemson University Library.

Mr. Gourlay distributed for information and discussion an analysis of library statistics of member libraries of the Association of Southeastern Research Libraries.

There was discussion of the advisability of limiting the number of copies of the lists of Recent Acquisitions of the Clemson University Library which are distributed to all faculty members about seven times each year. No action was taken.

Time of next meeting, Monday, April 8, at 3:30 p.m.

J. W. Gordon Gourlay, Secretary

FULBRIGHT AWARDS FOR STUDENTS

Selection of students for Fulbright Awards for study abroad is made in the fall semester, but students who wish to apply should begin now planning their program of study abroad. In general, an applicant should have a GPR of about 3.5 or better, should be fluent in the language of the country in which he wishes to study, and should plan a program of study or research that could be done best, or only, at a given institute or location abroad. It is also helpful if the foreign institute has indicated a willingness to accept and work with the student.

Faculty members are urged to suggest the program to students who meet the above qualifications and will have a bachelor's degree by the time they begin their study. Interested students may contact the chairman of the local Selection Committee, Professor Hugh Macaulay, Department of Economics, 206 Surrine Hall.

COMPUTER ADVISORY COMMITTEE MINUTES, FEBRUARY 13, 1974

Present: R. F. Zant, presiding; J. K. Bryan; S. E. Cromer; V. R. Harrell; G. Howard; P. Monaghan; M. C. Palmer; J. C. Peck; J. L. Strom; M. Wagner; R. E. Chapel, recorder.

The minutes of the previous meeting were approved as submitted.

Dr. Peck reported on recent activities of the Operations Subcommittee:

A questionnaire on usage of software packages has been distributed to users; a summary of response will soon be available.

Recommendations on fast-batch terminal policies have been submitted to the Computer Center, resulting in a modification of previous policies.

The shortage of user keypunches has been a subject of concern to the subcommittee.

Several suggestions were advanced to alleviate the keypunch problem. Professor Palmer noted that the severity of the problem can be expected to diminish during the current semester as student keypunching skills increase, but that ten more machines will be needed by the beginning of the fall semester.

The parent committee voted to officially express its concern for the lack of keypunches, and to support Professor Palmer's efforts to get ten additional machines by fall.

Dr. Zant reported on recent activities of the Technical Advisory Subcommittee:

Recent meetings have been concerned with plans for utilization of remote computing facilities. A report is expected to be available before the next meeting of the parent committee. Of the sixty-four lines now available for hook-up with the System/370, thirty-five have been allocated. A significant increase in the number of dial-up lines is planned.

Professor Palmer announced that the Division of Computer Systems Management in Columbia has approved the acquisition of software to permit switching from one type terminal to another (up to 300 baud) which will greatly enhance the usability of dial-up lines.

Mr. Strom reported on recent activities of the ad hoc committee on interface between the Computer Advisory Committee and other offices:



COMPUTER ADVISORY COMMITTEE MINUTES, FEBRUARY 13, 1974 (Continued)

A letter requesting their thoughts on the responsibilities of the Computer Advisory Committee has been sent to Dean Hurst, Dean Schwartz, and Professor Palmer.

Professor Palmer reviewed the status of Computer Center facilities:

The remote computing center in Martin Hall is operating effectively and has been well-received by the user community. The Mohawk equipment is suited to its functions, and most of the initial problems, with the notable exception of the shortage of keypunches, have been solved.

The System/370, Model 158 was installed the first week end in Feb. and began operating under OS. Installation of the virtual storage system is being accomplished on week ends, the evenings, and during slack periods.

A number of elusive software problems have delayed the new accounting system, but prompt resolution of the few remaining problems is anticipated.

AGRICULTURAL ENGINEERING

J. R. Lambert (Prof) and D. N. Baker (Alumni Visit Prof) participated in a review of research work underway at Tulane University in cotton crop simulation on March 7-8. They also participated in a pre-planning workshop on simulation of growth of Southern soybeans.

J. R. Lambert and D. N. Baker participated in the Fifth Annual Workshop of the Crop Ecosystem Simulation Group at Texas A&M University on March 25-28.

C. L. Barth (Assoc Prof) presented a paper entitled, "A Fundamental Approach to Anaerobic Lagoon Analysis" at the Sixth National Agricultural Waste Management Conference held in Rochester, N. Y. on March 25-27. This paper was co-authored by D. T. Hill (Asst Agr Eng).

BOTANY

C. J. Umphlett (Prof and Hd) made an invitational presentation on fungal parasites of mosquitoes to the Mosquito Control Associations of North Carolina, South Carolina, and Virginia which met jointly at Wrightsville Beach, N. C. on April 10-12.

## CIVIL ENGINEERING

B. L. Edge (Assoc Prof) presented a paper, "The Role of Mechanics in Environmental Engineering" at the Southeast Regional Meeting of the American Society for Engineering Education, Cookeville, Tenn., April 1.

Subhash C. Anand (Assoc Prof) presented a paper entitled, "A Prestressed Composite Continuous Bridge Girder," at the American Society of Civil Engineering National and Structural Engineering Meeting held at Cincinnati, Ohio, April 22-26.

Subhash C. Anand was the co-author, with V. K. Garg of GM Electromotive Division, Lagrange, Ill., of a paper entitled, "Shakedown of a Rolling Wheel Under Hub Loading," which was also presented at the ASCE National and Structural Engineering Meeting held at Cincinnati, Ohio, April 22-26.

## COLLEGE OF ARCHITECTURE

Samuel Wang (Assoc Prof) attended the National Conference of the Society for Photographic Education at Rochester, N.Y., March 20-24. The meetings were held at RIT, International Museum of Photography, and the Visual Studies Workshop. He is a member of the Board of Directors of the Society, and will continue to chair its Grants Committee.

## COLLEGE OF ENGINEERING

L. C. Wilcox (Dean), J. T. Long, (Prof, ECE) and T. L. Kane (Asst Prof, ECE) presented a paper entitled, "A New Approach to Spectrophotometer Design" at the Southeastcon IEEE 74 Conference held in Orlando, Fla., April 29 - May 1.

B. E. Gilliland (Asst to the Dean), W. D. Blair (Grad Stu, ECE) and B. W. Sauer (Asst Prof, DIS) presented the paper, "A Dual Channel Transducer - Telemetry System for Monitoring Oviduct Motility" at the Southeastcon IEEE 74 Conference held in Orlando, Fla., April 29 - May 1.

## ELEMENTARY AND SECONDARY EDUCATION

Elizabeth B. Galloway (Asst Prof) served as chairman of the accreditation team for School District Two, Anderson County Elementary Schools, for initial accreditation from Southern Association for Colleges and Schools. She also has been appointed consultant to School District One, Anderson County, ten year review for accreditation.

Elizabeth B. Galloway has been nominated as "Outstanding Educator of America." A full biography and reward of achievements will be featured in the 1974-75 edition of Outstanding Educators of America. A biography will also be included in Personalities of the South, 1974 edition.

ELECTRICAL AND COMPUTER ENGINEERING

R. W. Snelsire (Assoc Prof) will present a talk entitled, "Interactive Computer Programs for High School Students," before the meeting of the Institute of Electrical and Electronic Engineers in Columbia on April 9.

Papers to be presented at the Southeastcon IEEE 74 to be held in Orlando, Fla., April 29 - May 1:

J. N. Gowdy (Asst Prof) and M. L. Wolla (Prof), "Using an Interactive Computerized Classroom for Teaching an Introductory Course on Computers."

T. L. Drake (Assoc Prof) and J. W. Jones, Jr. (Duke Power Co), "Laboratory Data Station."

J. W. Lathrop (Prof), T. L. Drake, and A. E. Cowart (US Navy, Charleston), "Computer Identification of Individual Handwriting."

ENGLISH

Richard J. Calhoun (Alumni Prof), Robert W. Hill (Asst Prof) and William Koon (Asst Prof) have edited volume 6, no. 2 (April, 1974) of The South Carolina Review. The issue includes "'Tom! Are You Listening?' - An Interview With Fred Wolfe," edited by Richard J. Calhoun and Robert W. Hill.

Claud B. Green (Prof of English and Dean of Undergraduate Studies) reviewed C. Hugh Holman, The Roots of Southern Writing.

Harriet Holman (Prof) reviewed Stuart Levine, Edgar Poe: Seer and Craftsman.

Roberta C. Schwartz (Asst Prof) reviewed Joyce Carol Oates, Do With Me What You Will.

Richard J. Calhoun is the author of "Southern Writing: The Unifying Strand: a Review Essay" in the winter issue of The Mississippi Quarterly.

Charles L. Montgomery (Instr in Speech) will present a paper on the future of forensics at the annual meeting in Richmond of the Southern Speech Communication Association, April 10.



## ENTOMOLOGY AND ECONOMIC ZOOLOGY

Michael J. Sullivan (Asst Prof) and S. G. Turnipseed (Prof, Edisto Station) attended and participated in the Soybean Resistance Meeting in Urbana, Ill., March 4-6. Dr. Turnipseed acted as discussion leader at S-74 meeting.

Richard C. Fox (Prof) attended and participated in the Georgia Entomological Society meeting in Athens, Ga. on March 14-15. He presided over a session of the meeting.

John A. DuRant attended and participated in the organizational meeting of the Regional Research Project on the boll weevil in Stoneville, Miss., March 20-21.

## ENVIRONMENTAL SYSTEMS ENGINEERING

A. Ray Abernathy (Prof) has been named by Governor West to the South Carolina Board of Certification for Environmental Systems Operators, effective March 18, 1974 with term to expire July 10, 1975.

B. C. Dysart III (Assoc Prof) was recently elected to the Board of Directors of the National Wildlife Federation for a three-year term. Dr. Dysart represents a four-state region consisting of North Carolina, South Carolina, Virginia, and West Virginia. The National Wildlife Federation is the world's largest private conservation organization with three-and-a-half million members.

B. C. Dysart III was recently appointed by Governor West as a member of the South Carolina Heritage Advisory Board. The Board is to assist the S. C. Wildlife and Marine Resources Commission in the implementation of the "South Carolina Heritage Trust" program. This program consists of identifying, inventorying and protection of areas possessing important natural, environmental, recreational, historical, or archaeological values. The Board's first meeting was held in Columbia on April 9.

B. C. Dysart III was a speaker at a citizens' conference in Columbia on the Federal Water Pollution Control Act Amendments of 1972. The April 5 conference to promote more effective and knowledgeable public participation was co-sponsored by the Columbia Audubon Society, the Conservation Foundation, and the U. S. Environmental Protection Agency. Dr. Dysart's topic was "Techniques of Water Quality Planning and What the Citizen Needs to Know."



## HISTORY

Joseph L. Arbena (Assoc Prof) has been named to the program committee for the 1975 meeting of the Southern Historical Association. Professor Arbena will be responsible for organizing the sessions dealing with Latin American History.

E. M. Lander, Jr. (Alumni Prof) delivered an address, "The Decline and Resurrection of South Carolina" at a symposium of the S. C. District Branch of the American Psychiatric Association at Hilton Head, March 8; conducted a seminar "Problems of Publishing History Books," at Newberry College, March 19; reviewed Michael Fellman's The Unbounded Frame: Freedom and Community in Nineteenth Century American Utopianism in The Annals of the American Academy of Political and Social Science, March 1974.

Joseph L. Arbena presented "The Loss of Panama and Colombian Poetry of the Early Twentieth Century," on April 5 at the South Eastern Conference on Latin American Studies, Lafayette, Louisiana.

C. W. Bolen (Prof), President of the South Carolina Historical Association, presided at the annual meeting of the organization at Conway-Myrtle Beach, April 6; W. F. Steirer (Asst Prof), presented "Slavery and the Presence of Free Will," at the meeting; and H. D. Adams (Asst Prof) was re-elected editor of the Proceedings.

## HORTICULTURE

J. R. Haun (Assoc Prof) has received a \$60,196 research contract from the National Aeronautics and Space Administration for further work on plant-environment relationships. This is part of a program for application of remotely sensed environmental data from satellites to crop status evaluation and yield predictions. This contract brings the total amount to date for research of this type to \$209,124.

Recent publications: E. T. Sims, Jr. (Prof), C. E. Gambrell, Jr. (Asst Prof), and G. E. Stembridge (Prof), 1974. The Influence of (2-Chloroethyl) phosphonic Acid on Peach Quality and Maturation. J. Amer. Soc. Hort. Sci. 99 (2):152-155.

G. E. Stembridge and C. E. Gambrell, Jr. 1974. Measuring Peach Thinning and Maturation Responses. HortScience 9:29-30.

G. E. Stembridge. 1973. Effect of Growth Regulators on the Shape and Size of Fruits. Acta Horticulture 34:435-439. This review paper was part of an International Symposium of Growth Regulators in Fruit Production, published and sponsored by the International Society for Horticultural Science.

G. E. Stembridge attended the recent annual meeting of the International Dwarf Fruit Tree Association in Grand Rapids, Mich. and presented an invited talk on Fruit Growing in Australia and New Zealand.

### INTERDISCIPLINARY STUDIES

Myron Spector (Asst Prof) has had a paper entitled, "Application of Scanning Electron Microscope and Ion Beam Etching Techniques to the Study of Normal and Diseased Red Blood Cells" published in Scanning Electron Microscopy/1974 (ed. by O. Johari and I. Corvin, IITRI, 1974) pp. 665-672. Co-authors were S. L. Kimzey and L. Burns of the L. B. Johnson Space Center. The paper was also presented to the IITRI SEM meeting held April 8-11 in Chicago.

### MATHEMATICAL SCIENCES

The following faculty members attended and participated at the Mathematical Association of America meeting which was held in Knoxville, Tenn. on March 29-30:

William H. Ruckle (Prof) presented a talk on "Ambushing Random Walks."

John K. Luedeman (Assoc Prof) and Robert E. Fennell (Asst Prof) delivered a joint paper entitled, "Mathematical Modelling - Pro and Con."

Stanley M. Lukawecki (Prof and Acting Hd) chaired a session on Applied Mathematics.

J. V. Brawley (Prof) presented lectures at South Carolina State College in Orangeburg on March 27 and 28. The lecture topics were "The Gambler's Ruin" and "Can You Count?" The talks were sponsored by the Mathematical Association of America which maintains a nationwide panel of Visiting Lecturers.

### MECHANICAL ENGINEERING

T. Yang (Prof) jointly presented a paper with C. D. Nelson (Clemson Ph.D. 1972) entitled, "The Design and Performance of Axially Symmetrical Contoured Diffusers Employing Suction Boundary Control," at the International Gas Turbine Conference in Zurich, Switzerland, April 1.

### POLITICAL SCIENCE AND SOCIOLOGY

William C. Capel (Assoc Prof) had a paper, "Sexual Activity on a Southern Campus: Correlates, Comparisons and Predictions," presented at the meeting of the Southwestern Sociological Association in Dallas, Texas, March 27-30. The paper was read by P. J. Wadsworth (Instr) in Professor Capel's absence.

R. H. Hingers (Instr) presented a paper entitled, "The Structural Integration of the Commune: A Theoretical Approach to the Demise of Intentional Communities," at the Southwestern Social Sciences Conference in Dallas, Texas on March 29.

PHYSICS AND ASTRONOMY

B. V. Bronk (Assoc Prof) was a guest of the National Cancer Institute Meeting of the Division of Cancer Treatment held at Bethesda, Md., April 5. Dr. Bronk also recently attended and participated in the conference on DNA repair held at Squaw Valley, Calif.

ZOOLOGY

Byron R. Ingram (Asst Prof) and Robert W. Boyne (Grad Asst) attended the annual meeting of the Midwest Benthological Society at Cincinnati, Ohio on March 27-29 and participated in two symposia. The Environmental Protection Agency's laboratories in Cincinnati were also invited.

COUNSELING CENTER

The Counseling Center (Dr. Jack Mulkeen) and the Sociology Club (Dr. Helen Marie Fleishman) presented a film entitled, "Assertive Training for Women" at Earle Hall on April 17th. This film will be offered again next fall.

DEPARTMENT OF UNIVERSITY UNION PROGRAMS

Buford E. (Butch) Trent, a member of the National Board of Directors for the YMCA, attended a meeting of the Board in New York City, February 27 - March 2. He was appointed Chairman of the Southeast Region Awards Committee. Mr. Trent also served, April 16-20, as a Consultant to the Model General Assembly of the Virginia YMCA. The conclave was held in Richmond, and was attended by 700 high school and college students from the state of Virginia.

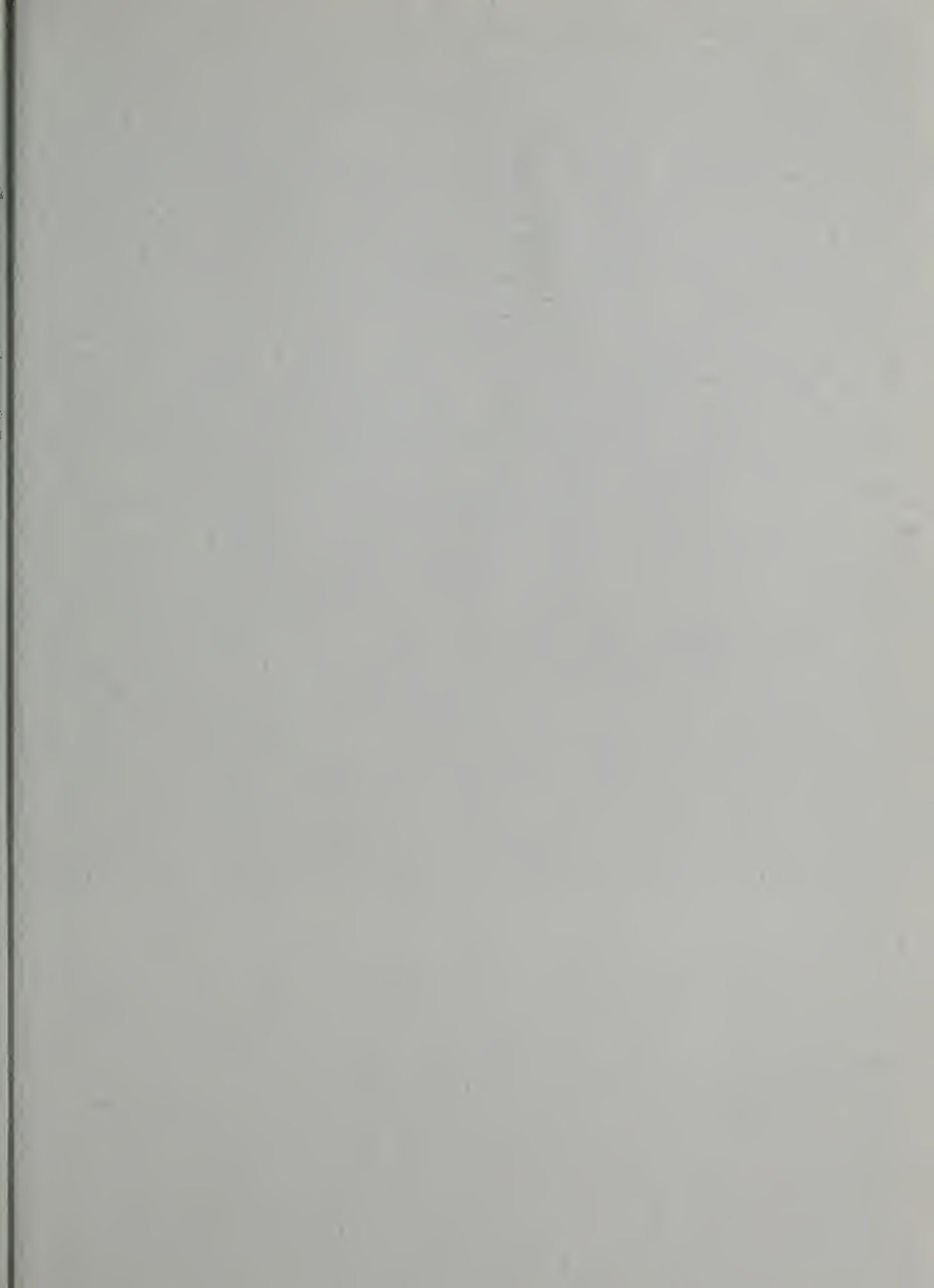
Arthur B. Hartzog, Union Program Director, attended the 51st Annual Conference of the Association of College Unions - International. 1,000 delegates representing colleges and universities throughout the world attended. The Conference was held at the Royal York Hotel, Toronto, Ontario, Canada, March 24-27.

26 May 1, 1974

# CALENDAR OF CAMPUS EVENTS

- 1-2 -- Nursing Workshop: "Legal Aspects of Nursing." Sponsored by the College of Nursing. Gold Room, Clemson House, 9:30 - 4:30 p.m. Mr. John Gimball, Assistant Attorney General State of South Carolina will be the keynote speaker at 10:00 a.m. on May 1 and will speak on "The Nursing and Medical Practice Acts of South Carolina and Current Status of the Physician's Assistant." Open to all registered nurses. Expected enrollment, 50 plus.
- 4 -- Medical College Admission Test: M101 Martin Hall, 8:00 a.m.
- 5-14 -- Architecture Exhibition: Thesis Show, a display of Clemson graduate student work. Rudolph Lee Gallery, College of Architecture. Gallery open 9-4:30 p.m. weekdays.
- 5-14 -- Exhibition: "Bruce Miletto: One Man Show." Recent works by the young artist-in-residence of the S.C. Art Commission's ARTS van (Arts Resource Transportation Service), a mobile art studio that will be in the Clemson area during June. Rudolph Lee Gallery, Gallery open 9-4:30 p.m. weekdays.
- 9 -- Engineering Short Course: "Soil Compaction with Applications for the Construction Industry" for engineers and inspectors in construction. Sponsored by the Department of Civil Engineering. Lowry Hall, Room 100, 8:30-4:30 p.m., registration fee \$40.00.
- 10 -- Spring Co-op Employment Ends, Schedule B.
- 10 -- Joint Army and Air Force Commissioning, 9:00 a.m., Daniel Hall Auditorium.
- 10 -- Commencement, 11:15 a.m., Littlejohn Coliseum.
- 13 -- Summer Co-op Employment Begins, Schedule A.
- 13-15 -- Conference: "Polymer Flow: Extrusion and Spinning." Co-sponsored by the College of Industrial Management and Textile Science and the College of Engineering. DeFore Room of Sarrine Hall, 9:00 a.m.
- 14-15 -- Dairy Science Conference: Co-sponsored by the Department of Dairy Science and the S.C. Dairy Association. 10:00 a.m., Clemson House. Expected enrollment, 100.
- 14-15 -- Eighteenth Annual Poultry Health and Management Short Course. Co-sponsored by the Department of Poultry Science and the S.C. Poultry Improvement Association. 8:00 a.m., Clemson House. Expected enrollment, 100.





### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

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Vol. 13 No. 18

MAY 15 1974

May 15, 1974



**AWARD WINNERS** — President R.C. Edwards (left) presents top International Biomaterials Awards during the sixth annual International Symposium on Biomaterials held at Clemson April 20-24. The 1974 winners were (L-R) Dr. A. Norman Cranin of Brookdale Medical Center, Brooklyn, N.Y. for contributions to biomaterials literature; Professor Robert M. Kenedi, Strathclyde, University, Glasgow, Scotland for basic biomaterials research; and Dr. John T. Scales, Institute of Orthopaedics, Stanmore, England, for clinical biomaterials research.

## "Academic Common Market" Established By Southern Regional Education Board

An "Academic Common Market" which specializes in interstate commerce of knowledge has been established by the Southern Regional Education Board.

The program will crank up this fall with

state-supported schools in 11 participating Southern states, including South Carolina. Three other states are expected to join the market soon.

Under the new arrangement, says Dean Victor Hurst, Clemson's vice president for academic affairs, qualified South Carolina residents can enroll in selected graduate study programs in the other states--without

paying out-of-state tuition rates. The same holds true for residents of other states who enroll in South Carolina.

Of the 16 graduate programs in South Carolina selected by the S.C. Commission on Higher Education to put into the "market pool," open to other states, 13 are located at Clemson.

The Clemson programs include agricultural mechanization (M. Agric.), agricultural economics (M. Agric., M.S., Ph.D.), bio-engineering (M.S.), forestry (M. For.), plant physiology (Ph.D.), Animal Physiology (Ph.D.), and entomology (M. Agric., M.S., Ph.D.). Also, nutrition (M. Nutr. Sci., M.S., Ph.D.), Management Science (Ph.D.), Ceramic Engineering (M. Engr., M.S.), Environmental Systems Engineering (M. Engr., M.S.), Textile and Polymer Science (Ph.D.), and Textile Science (M.S.).

"The Academic Common Market offers two major advantages to South Carolina," Hurst says. "It opens the door for our residents to enroll in graduate programs not offered here and at much lower tuition costs, and secondly, it saves the taxpayers money by eliminating the need for introducing many new graduate programs at our own state schools."

For example, a South Carolina resident wants to study for a master's degree in astronomy but finds that such a program is not offered in this state. Under the Common Market arrangement, he could apply for admission and if accepted enroll at the University of Florida as a graduate student.

With the approval of the Common Market coordinator in this state -- in this instance, Dr. Frank Kinard, Asst. Director, Commission of Higher Education--he would be allowed to pay the same tuition as a Florida resident.

At in-state rates he would pay only \$720 tuition for a year (three academic quarters) of study, as opposed to the \$1,770 in tuition he would normally pay as an out-of state student. That's a saving of more than \$1,000 a year.

South Carolina residents under the arrangement can already study in about 40 graduate programs at other states' institutions in everything from acoustical studies and African history to nuclear engineering, and speech and hearing science.

As a result of the Academic Common Market additional educational opportunities will be available to many students, and existing programs in the Southern region will be more efficiently utilized--all at a saving to the students, institutions and taxpayers, says William Hovenden, of Atlanta, who directs the regional administration of the program.

### **Professor Todd Appointed Head of Department of Industrial Management**

Prof. B.J. Todd, a member of the Clemson faculty for 22 years, has been appointed head of the department of industrial management in Clemson's College of Industrial Management and Textile Science.

The appointment, effective July 1, is announced by Dean Wallace D. Trevillian.

Todd, professor of industrial management and mathematical sciences, succeeds Prof. C.H. Whitehurst Jr., who has chosen to return to full-time teaching and research.

"The department achieved outstanding academic recognition under Dr. Whitehurst," says Trevillian, "and as a result of program development and growth, it is being divided July 1 into two departments: industrial management, and accounting and finance.

"In addition to its four undergraduate degree programs, it was this department that first pioneered the Clemson-Furman University Master of Business Administration Degree program and the doctoral program in management science offered jointly with the department of mathematics."

The department of industrial management was established in 1955 as a unit of the College of Arts and Sciences. It merged in 1962 with the School of Textiles,



forming the College of Industrial Management and Textile Science.

A native of Loris, Todd, 50 received the bachelor's and master's degrees from Clemson; the doctoral degree from North Carolina State University.

#### **"The Tiger" Wins Awards at 10th Annual Southeastern College Newspaper Competition**

Clemson's student newspaper, "The Tiger," won three honorable mention awards in the tenth annual Southeastern College Newspaper Competition (SCNC), co-sponsored by the Hollins College, Virginia student newsmagazine "HC," and eight metropolitan dailies.

"The Tiger," edited by Nancy Qualls, won in the following categories: "Charleston

(W.Va.) Gazette and Sunday Gazette-Mail" award for feature writing, "Raleigh (N.C.) News and Observer" award for all around excellence, and the "Roanoke (Va.) Times" award for best college non-daily.

#### **Clemson Awards Record Number Of Degrees at Commencement**

Clemson awarded 1,039 degrees, including advanced degrees, at commencement May 10.

President R.C. Edwards conferred 830 bachelor degrees, 27 associate in arts degrees, 176 master degrees and 6 doctorates. Since graduation one year ago, Clemson has awarded 1,985 diplomas and 29,454 in its history. Second lieutenant commissions were conferred on 38 ROTC cadets.

## MINUTES OF THE UNDERGRADUATE COUNCIL, APRIL 12, 1974

The Undergraduate Council met in the Conference Room, 300 Sikes Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Ralph W. Gilchrist, Robert F. Hebert, Gwendolen Lee, Jerome V. Reel, Malcolm J. Skove, Kenneth N. Vickery, Muriel Bishop (Visitor), Robert L. Cross (Visitor), and C. Ronald Dillon, President of the Faculty Senate.

The minutes of the March 15, 1974, meeting were approved as distributed.

Dean Green announced that the report from the committee on General Education Requirements and the Distinction between the B.S. and B.A. Degrees was received as information by the deans of the various colleges within the University. Departmental and College Curriculum Committees will review the report and make recommendations to the College Deans. Reports from the College Deans are to be forwarded to Dean Green by October 1, 1974.

### College of Education

The following courses were approved:

Ed	103	Study Techniques, 1 cr (0 and 3)
In Ed	418	Technological Concepts in Manufacturing, 3 cr (2 and 3)

### College of Industrial Management and Textile Science

The following courses were approved:

Law	312	Commercial Law, 3 cr (3 and 0)
Law	313	Commercial Law, 3 cr (3 and 0)
Law	322	Legal Environment of Business, 3 cr (3 and 0)
IM	499	Computer Programming II, 1 cr (0 and 3)

### College of Physical, Mathematical, and Biological Sciences

The following course and curriculum revisions were approved.

Ch	229	Organic Chemistry Laboratory, 1 cr (0 and 3)
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The proposed revision of the Medical Technology Curriculum was approved. The revision of the curriculum will enable the student who is not accepted into a hospital school for the Medical Technology Program to pursue a major in chemistry or microbiology. (A copy of the revised curriculum is attached.)

MINUTES OF THE UNDERGRADUATE COUNCIL, APRIL 12, 1974 (Continued)

Following discussion of the committee report on A Class Attendance Policy for Undergraduates at Clemson University a recommendation was made to return the report to the ad hoc committee for further consideration.

Dean Green presented a statement on the Pre-Veterinary Medicine Program from the College of Agricultural Sciences, which also had the approval of the College of Physical, Mathematical, and Biological Sciences. After discussion the Council approved the request that students enrolled in the Pre-Veterinary Medicine curriculum at Clemson transfer to a major in Animal Science, Dairy Science, Poultry Science, or Zoology before the end of the second semester of the freshman year to complete the three-year program. (A copy of this statement, to be published in the next edition of the Clemson University Announcements, is attached.)

A report from the Committee to Study the Clemson University Grading System for Undergraduates was presented by Dean K. N. Vickery, the chairman of the ad hoc committee.

The report as amended was approved by the Council and is attached to these minutes.

**-MEDICAL TECHNOLOGY-****Freshman Year****First Semester**

Ch 101	General Chemistry	4 (3,3)
Engl 101	English Composition	3 (3,0)
Math 106	Calculus of One Var.	4 (4,0)
M.T. 101	Introduction to Medical Technology	1 (1,0)
Zool. 101	Animal Biology	3 (3,0)
Zool. 103	Animal Biology Lab	1 (0,2)
or Bot 101	Plant Biology	3 (3,0)
and Bot 103	Plant Biology Lab	1 (0,2)
Elective		<u>1</u>
		17

**Second Semester**

Ch 112	General Chemistry	4 (3,3)
Engl 102	English Composition	3 (3,0)
Math 108	Cal. and Lin. Algebra	4 (4,0)
Bot 101	Plant Biology	3 (3,0)
Bot 103	Plant Biology Lab	1 (0,2)
or Zool 101	Animal Biology	3 (3,0)
and Zool 103	Animal Biology Lab	1 (0,2)
Elective		<u>3</u>
		18





## College of Agricultural Sciences

## Statement on Pre-Veterinary Medicine Program

The curriculum in Pre-Veterinary Medicine is designed to meet the general admission requirements of certain colleges of veterinary medicine. Since the admission requirements are not uniform, students should consider the specific requirements of veterinary colleges when planning their programs. Under the Southern Regional Education Plan, ten students from South Carolina may enter the College of Veterinary Medicine at the University of Georgia each year. Under this plan, students are exempt from out-of-state fees.

Students enrolled in the Pre-Veterinary Medicine curriculum at Clemson will transfer to a major in Animal Science, Dairy Science, Poultry Science, or Zoology before the end of the second semester of the freshman year to complete the three-year program. After two years in the program, students may apply to a college of veterinary medicine, but only the exceptional students are accepted after two years of college studies.

After satisfactorily completing three years at Clemson University in one of the four majors listed above and after satisfactorily completing the freshman year in a college of veterinary medicine, a student may apply for a bachelor of science degree from Clemson University.

If a student is not accepted by a college of veterinary medicine after the second or third year of pre-veterinary studies, the requirements for a Bachelor of Science degree at Clemson may be completed in one of the four majors listed above.

Under the Southern Regional Education Plan, there is no limit on the number of times a student may apply for admission to a college of veterinary medicine.

Report of the Committee to Study  
The Clemson University Grading System  
for Undergraduates

Last April this Committee prepared a questionnaire intended to assess faculty and student opinion regarding a number of grading practices. This questionnaire was distributed to all faculty and to a sample of the student body. The results of this survey indicated that the WP/WF regulation for recording a course which was dropped was a primary point of dissatisfaction. Accordingly, the Committee recommended that the WP/WF grade be replaced with a grade of "W-Withdrew" for undergraduate courses dropped prior to the last five weeks of classes. A similar recommendation had been previously passed by the Faculty Senate. The Committee's recommendation was adopted by the Undergraduate Council and the Educational Council and is in effect for the current semester for undergraduates.

The Committee also reviewed the operation of the experimental Pass-Fail Grading System for the period 1970-1973. This system was adopted by the Educational Council on May 5, 1969, and one of the provisions was that the system be reviewed and evaluated and necessary changes made after a period of three years. The Committee reviewed the attached reports from the Registrar which indicate the interest in the program, the amount of experimentation, and the achievement of students as indicated by conventional grades. Also attached is a copy of the statement as adopted by the Educational Council on May 5, 1969. The Committee also considered a Student Senate request which would permit "courses in the major field above the major requirements" be taken pass-fail.

The recommendation of the Committee is that the current Pass-Fail Grading System be continued with a change in the maximum number of credit hours which may be taken Pass-Fail from 14 to 15 hours and that students be allowed to take courses in the major field above the major requirements on a Pass-Fail basis. Also that additional steps be taken to acquaint students with the policy and its implementation as was done in 1970.

The Committee recommends that the ABCDF grading system be continued in its present form. The Committee also studied the preliminary or mid-term grading system and the "forgivable F" policy for first semester freshmen. The recommendation of the Committee is that the preliminary grading system and the "forgivable F" for first semester freshmen both be continued in their current form.

L. C. Baxter  
J. C. Fanning  
D. W. Bradbury  
R. M. Sprott  
R. L. Cross  
K. N. Vickery, Chairman

March 15, 1974

## CIVIL ENGINEERING

Rudolf E. Elling (Assoc Prof) attended the annual meeting of the American Institute of Steel Construction in Chicago, May 2-3. Dr. Elling was the guest of the Virginia-Carolinas Steel Fabricators.

A paper "Surface-Bonded Concrete-Block Panels" by H. W. Busching (Assoc Prof and Hd), D. H. Hamilton (Grad Stu) and J. G. Goree (Assoc Prof, Mech Engr) appeared in the April Journal of the Engineering Mechanics Division of the American Society of Civil Engineers.

## COLLEGE OF ENGINEERING

B. E. Gilliland (Asst to the Dean) and A. S. Collins (Clemson Ph.D. 1973) are the authors of a paper entitled, "Control of Anaerobic Digestion Process," which was published in Journal of the Environmental Engineering Division, Proceedings of the ASCE, V. 100, No. EEZ, pp. 487-506, April 1974.

William B. Barlage Jr. (Professor of Chemical Engineering) and William F. Beckwith (Associate Professor of Chemical Engineering) were co-chairmen for a course, "Polymer Flow: Extrusion and Spinning," May 13-15. The course was co-sponsored by the College of Engineering and the College of Industrial Management and Textile Science.

## CONTINUING ENGINEERING EDUCATION

The Department of Environmental Systems Engineering will sponsor a series of short courses for water and wastewater plant operators from May 14-17. Each of these short courses is co-sponsored by the Water and Pollution Control Association of S.C. and is administered through Continuing Engineering Education. This series of short courses will include ten different courses which are designed to assist the operator of either water treatment plants or wastewater treatment plants. The certification examination will be available on the last day of each of these courses for those participants who wish to upgrade their certification.

T. M. Keinath (Assoc Prof) and J. F. Andrews (Prof) will present a short course entitled, "Industrial and Municipal Wastewater Treatment" from May 20-24. John H. Austin (Prof and Hd, Env Sys Eng) will also lecture at this short course. This is sponsored by the department of Chemical Engineering and is administered through Continuing Engineering Education.

## ECONOMICS

Alejandro Velez (Instr) presented a comment on "The Economics of Macondo" by Dr. Paul Moncarz, Florida International University, at the 21st Southeastern Conference on Latin American Studies (SECOLAS), Lafayette, La., April 4-6.

## ECONOMICS (Continued)

Bruce Yandle (Assoc Prof and Hd) has been selected to be a participant in the Conference on Businesses' Role and Responsibility in Modern Society to be held on the campus of the Catholic University of America, Aug. 14-15. The conference is co-sponsored by Columbia University and the General Electric Education Foundation.

Robert F. Hebert (Asst Prof) and R. B. Ekelund, Jr. (Texas A&M) have had a monograph of theirs accepted for publication in the new series of Sage Professional Papers in Political Economy. The monograph entitled, "French Engineers and Public Finance in the Nineteenth Century," will be the inaugural paper in the Sage Monograph Series.

## ELECTRICAL AND COMPUTER ENGINEERING

J. W. Lathrop (Prof) served as organizer and chairman of a panel discussion on "Academic Microelectronic Programs" at the Electronic Components Conference in Washington, D.C. on May 14.

## ELEMENTARY AND SECONDARY EDUCATION

William W. Pennscott (Assoc Prof) made a demonstration-presentation of the Vocational Exploration Group, a career development group procedure, for the Pickens County counselors at their workshop meeting on April 12.

William W. Pennscott has been appointed a member of Commission XII (Professional Education of Student Personnel Workers in Higher Education) of the American College Personnel Association. At the ACPA Convention in Chicago, April 15-16, Dr. Pennscott was selected as chairman of a task force of Commission XII entitled, "Innovative Teaching Practices in the Preparation of Student Personnel Workers in Higher Education."

Frederick C. Raetsch (Asst Prof) gave the opening presentation, "Functional Reading in Schools," and was a panel member for "Administrative Guidelines" at the Reading and English in the Content Area Conference, held at Piedmont TEC, Greenwood, April 3-4.



ENGLISH

Louis Henry (Assoc Prof) was a member of a panel entitled "Evaluating the Freshman Composition: Teacher and Student" at the annual meeting of the Georgia-South Carolina College English Association in Orangeburg.

Mark S. Steadman (Assoc Prof) participated in the annual meeting of the Georgia-South Carolina College English Association as a panelist discussing "The Writer Who Teaches Literature."

Mark S. Steadman led a discussion on "The Novel in Theory and Practice," at the Coker College Spring Festival.

William Koon (Asst Prof) was a panelist discussing "Contemporary Letters: The View from the Editor's Desk" at the Spring Colloquium of the University of Western North Carolina.

Arthur J. Fear (Assoc Prof of Speech) represented South Carolina on the executive committee of the Southern Speech Communication Association in Richmond, April 9-12.

Charles L. Montgomery (Instr in Speech) read a paper on the future of forensics in the South at the SSCA convention in Richmond. He was re-elected Secretary-Treasurer of the association.

Barbara M. Montgomery (Instr in Speech) spoke on "Campaign Financing Reform - An Assessment" April 22 as one of the Student Union Faculty Lecture Series.

ENVIRONMENTAL SYSTEMS ENGINEERING

John H. Austin (Prof and Hd) presented a paper, "Educational Needs in Environmental Engineering" at the annual meeting of the Institute of Environmental Sciences, Washington, D.C. on May 1.

John H. Austin and Ralph D. Elliott (Dir, Prof Dev) are principal investigators on an \$8,180 grant, "Management Training for Water and Wastewater Utility Managers," from the U.S. Office of Education under the Title I Higher Education Act of 1965 to develop and present a water and wastewater utility management course at Clemson. The grant period is for four months commencing April 1, 1974.

Linvil G. Rich (Prof) has received a \$65,360 grant from the U.S. Environmental Protection Agency to provide education opportunities for graduate students in the environmental area. The project, "Interdisciplinary Education in Environmental Systems Management," will cover the period July 1, 1974 to August 31, 1975 and is a continuation of a five-year contract which began July 1, 1973.

## ENVIRONMENTAL SYSTEMS ENGINEERING (Continued)

John H. Austin (Prof and Hd) is the program coordinator for a Title I project entitled, "A Public Education/Participation Program in Land-Use Problems and Issues in South Carolina - Development of an Educational Program." The grant is in the amount of \$27,685 for the period April 1, 1974 - March 31, 1975. The project will inform and educate the public of the complexities of land-use problems and issues.

## GEOLOGY

R. D. Hatcher, Jr. (Assoc Prof) presented a paper at the Southeastern Sectional Meeting of the Geological Society of America, in Atlanta, April 3-6, entitled, "Brevard Zone Tectonics Along the South Carolina-Georgia Border."

R. D. Hatcher, Jr. presented an invited seminar to students and faculty of Catawba College, Salisbury, N.C., April 10, entitled "Comparative Tectonics of North America's Mountain Systems."

## INTERDISCIPLINARY STUDIES

A. M. Weinstein (Asst Prof) presented an invited lecture to the Midlands Chapter of the Association of Operating Room Nurses in Cayce on April 6 entitled, "What Every Nurse Should Know About Implants."

## OFFICE OF PROFESSIONAL DEVELOPMENT

On May 16-17, the Office of Professional Development will conduct a short course, "Manpower--Who Is Responsible?" The course will be held at the Holiday Inn and is co-sponsored by the College of Industrial Management and Textile Science and the International Association of Personnel in Employment Security.

J. C. Hubbard, Jr. (Prof of Textile Sci) will conduct a "Weaving I: Basic Design" Course, May 20-24. It will be jointly sponsored by the College of IM & TS and the Office of Professional Development.

The College of IM & TS and the Office of Professional Development will conduct a short course, "Statistical Quality Control," May 21-23. B. J. Todd (Prof) is the course chairman.

The College of IM & TS and the department of Textiles will co-sponsor a short course, "Introduction to Textile Manufacturing" from June 11-13. J. C. Hubbard, Jr. will be the chairman.

OFFICE OF PROFESSIONAL DEVELOPMENT (Continued)

F. T. Simon (J. E. Sirrine Prof of Textile Sci) will conduct a "Basic Color Science" Seminar, May 22-24. He will also conduct a more advanced color course, "Application of Computers to Color Science," May 27-31. Both courses are co-sponsored by the Office of Professional Development and the College of IM & TS.

The College of IM & TS will sponsor a Professional Development Program entitled, "Carpet Technology" on May 21-22. Hassan M. El-Behery, Manager of Textile Processing, Phillips Fibers Corp., Greenville is the chairman.

The department of Industrial Management will sponsor a Professional Development Program, "A Seminar on Management by Objectives," May 28-29. E. Earl Burch (Asst Prof) is the chairman of the course.

Carleton W. Roberts (Assoc Prof, Textile Chem) is chairman for a course, "Basic Textile Chemistry," to be held in the College of IM & TS, June 3-7. It will be co-sponsored by the AATCC (Palmetto Chapter).

A two day conference, "Financial Management," will be held in the College of IM & TS, June 4-5. J. David Acker (Instr of Financial Acct and Managerial Acct) will be the chairman.

"Utilizing Transactional Analysis in Industry" will be the name of a short course conducted by the Office of Professional Development on June 6, 1974. It will be co-sponsored by the College of IM & TS and the College of Education. Don Keller (Asst Prof, Ed) is the chairman.

MICROBIOLOGY

M. J. B. Paynter (Assoc Prof and Hd) presented a seminar entitled, "Growth Studies on Methanogenic Bacteria in Chemostat Culture" to the faculty and students of the department of Microbiology, University of Georgia on Feb. 7.

M. J. B. Paynter presented a talk at Furman University on March 12. The talk was entitled, "Biological Formation of Methane."

The following papers were presented by faculty and graduate students at the spring meeting of the South Carolina branch of the American Society for Microbiology, held in Myrtle Beach on March 29:

"The Influence of Thermal Loading on Die-off Rates of Escherichia coli in Sewage," by R. K. Guthrie (Prof), D. S. Cherry (VPI, Blacksburg, Va) and F. L. Singleton (Undergrad Stu).

### MICROBIOLOGY (Continued)

"Further Studies on the Survival of Salmonella and Fecal Coliforms in Swine Waste Lagoon Effluents," by D. J. Krieger (Grad Stu), J. H. Bond (Assoc Prof), and B. W. Fogle (Undergrad Stu).

"Soil Enrichment and Pure Culture Studies with the Herbicide Cotoran," by J. H. Warner (Grad Stu) and N. D. Camper (Assoc Prof, Botany and of Plant Path and Physiol).

"Microbial Degradation of 3,5-Diiodo-4 Hydroxy-benzonitrile in Soil," by J. C. Hsu (Grad Stu) and N. D. Camper. Mr. Hsu received the "South Carolina ASM President's Award" for this paper. The award is given for the best student paper, judged on the quality of the research, presentation of the paper, and the quality of a written manuscript.

"Stabilization of Bacillus megaterium KM Protoplasts and Their Use in Membrane Transport Studies," by G. L. Coffman (Grad Stu) and A. W. Baxter (Assoc Prof).

In recognition of her special service to the American Society for Microbiology Ann W. Baxter (Assoc Prof) has been awarded one of the bronze medallions commemorating the 75th anniversary of that society.

### NURSING

Ms. Suzanne Parks, Coordinator of Nursing Inservice Projects directed a two day workshop entitled "Legal Aspects of Nursing" for continuing education of registered nurses May 1 and 2 at the Clemson House.

### PHYSICS AND ASTRONOMY

The April 27, 1974 edition of Science News has an article entitled, "Streaking Through the Universe" which discusses in lay terms a paper published by Talmadge Davis (Grad Stu) and J. R. Ray (Assoc Prof).



### POLITICAL SCIENCE AND SOCIOLOGY

Horace W. Fleming (Asst Prof) presented a paper entitled "Reorganizing Local Government: The Hilton Head Island, S. C. Experience" at the Ninth Annual Meeting of the South Carolina Political Science Association, April 20 at Clemson University.

Horace W. Fleming participated on a panel of visiting faculty examining Honors theses in political science at Vanderbilt University during Honors and Awards Day ceremonies, April 26.

Harold E. Albert (Assoc Prof) has been selected as a participant of the Atomic Energy Commission Institute on Energy and Environmental Impact at the University of California at Berkeley, which will be held during July 1974.

Harold E. Albert developed and chaired a panel on "Natural Resources Management: The Federal Perspective" at the National Conference of the American Society for Public Administration at Syracuse University, Syracuse, N.Y. on May 6.

Harold E. Albert chaired a panel at the South Carolina Political Science Association on April 20 at Clemson University.

Charles W. Dunn (Assoc Prof and Hd) published an article, "The Occupational Status of State Legislators: A Research Note," in the Journal of Political Science, Volume I, No. 1.

Marvin R. Pilo (Instr) delivered a paper entitled, "Sequential and Organizational Models of School Decentralization: New York City and Detroit," at the annual meeting of the American Educational Research Association on April 19 which was held in Chicago, Ill.

Helen Marie Fleishman (Asst Prof) presented a paper, "Shifts in Ideological Perspective and the Resurgence of Moral Theory," at the Southern Sociological Society in Atlanta, Ga., April 18.

### POULTRY SCIENCE DEPARTMENT

Walter S. Walker, associate professor, Poultry Science Department, has been honored by the American Rabbit Breeders Association for his work with South Carolina rabbit growers. Walker, who also serves poultry and game bird producers from the University's Livestock-Poultry Health Laboratory at Pontiac, received a plaque from the national rabbit association in recognition of "dedication to the rabbit industry and breeders in the state." He has also received a life membership from the S.C. rabbit growers. Walker has conducted shortcourses for producers and provided assistance in the organization of a cooperative and construction of a rabbit processing plant near Aiken.

TEXTILE DEPARTMENT

E. A. Vaughn (Assoc Prof) was chairman for a session of the Second Annual International Nonwoven Disposable Fabrics Association's Technical Symposium, March 5 in Washington, D.C.

E. A. Vaughn presented a paper, "The Effect of Cotton Fiber Properties on the Quality of Turbine Spun Yarns," at the spring meeting of the Textile Quality Control Association, April 11 in Greenville.

E. A. Vaughn has been elected President of the Textile Quality Control Association for the forthcoming year.

John J. Porter (Assoc Prof) will chair a session of the Textile Chemistry and Processing Conference, April 29 in New Orleans, La.

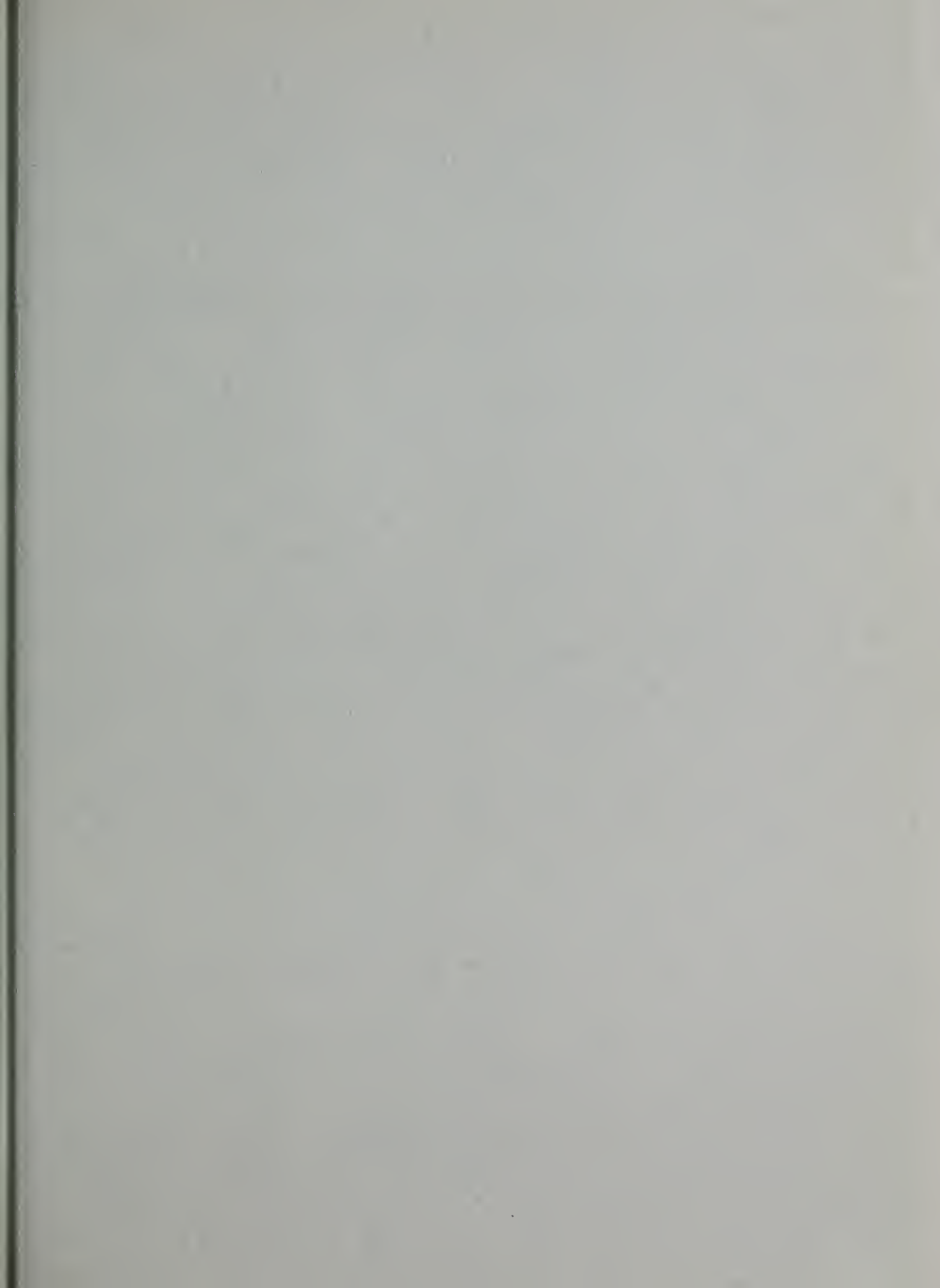
J. C. Hubbard, Jr. (Prof) gave a lecture entitled, "The Textile Arts" to the Art Department of Western Carolina University and The Arts and Crafts Club of Cullowhee, N. C. on April 11.

## CALENDAR OF CAMPUS EVENTS

- 15-31 Architecture Exhibition: Thesis Show, a display of Clemson graduate student work. Rudolph Lee Gallery, College of Architecture. Gallery open 9-4:30 p.m. weekdays.
- 15-31 Exhibition: "Bruce Miletto: One Man Show." Recent works by the young artist-in-residence of the S.C. Art Commission's Arts Resource Transportation Service van. Rudolph Lee Gallery, Gallery open 9-4:30 p.m. weekdays.
- 15 Short Course: The basics of beekeepers for hobby beekeepers or others interested in taking up the art. Sponsored by the Extension Service. Food Industries Auditorium, 10:00 a.m. Open to the public, admission free.
- 20-24 College Week for Senior Citizens, first session: A program offering a variety of educational, recreation and field trip activities -- all designed especially for senior citizens. Conducted under the auspices of the Clemson University Institute for Senior Citizens. For further information, contact the Department of Recreation and Park Administration, 656-3400.
- 21 Classes Begin, first session summer school.
- 21-22 Professional Development Program: "Carpet Technology From Fiber to Carpets and Rugs." Sponsored by the Office of Professional Development, College of Industrial Management and Textile Science. Sirrine Hall, 9:00 a.m.
- 21-23 Professional Development Program: "Statistical Quality Control." Sponsored by the Office of Professional Development, College of IM&TS. Sirrine Hall, 9:00 a.m.
- 22-24 Professional Development Program: "Basic Color Science." Sponsored by the Office of Professional Development, College of IM&TS. Sirrine Hall, 9:00 a.m.
- 27-31 College Week for Senior Citizens, second session.
- 27-31 Professional Development Program: "Application of Computers to Color Science." Sponsored by the Office of Professional Development, College of IM&TS. Sirrine Hall, 9:00 a.m.
- 28-29 Professional Development Program: "Management by Objectives." Sponsored by the Office of Professional Development, College of IM&TS. Sirrine Hall, 9:00 a.m.







### PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 19

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June 1, 1974



**A NEW AWARD** — President R. C. Edwards presents the Alumni Master Teacher Award, presented for the first time at Commencement May 10, to Dr. Louis L. Henry, associate professor of English. Dr. Henry was selected by the 30-member Student Alumni Council from nominations submitted by students. The award, to be given annually at Commencement, carries a \$1,000 stipend. Dr. Henry is a 1953 Clemson graduate who received his master's and doctoral degrees from Florida State University. He has been a member of the Clemson faculty since 1958.

## **Textile Department Receives \$12,000 Graduate Fellowship Grant**

A new fellowship to support graduate student research in the color science field has been established at Clemson.

The fellowship was made possible by a

\$12,000 grant to Clemson's department of textiles from the Sandoz Foundation of the Swiss-based Sandoz Colors and Chemicals firm.

Announcement of the Sandoz Fellowship in Color Science was made May 20 during a luncheon honoring Dr. Achille Giamara of

Hanover, N.J., senior vice president of the company.

The two-year fellowship will first be awarded in August to a student who will begin graduate studies in the 1974-75 academic year.

"This is the first specifically designated fellowship at Clemson in this field," said Frederick T. Simon, Sirrine Professor in Textile Science. The research will be conducted at the university's Color Science Center under Simon's direction.

The Sandoz Foundation also supports another program in textile education at Clemson. It was announced last fall that the foundation would provide a total of \$15,000 for Clemson to conduct an experimental program aimed at making more highly qualified technically trained people available to the textile industry in a shorter period of time.

The program allows selected academically superior students to begin research for an advanced degree while still in undergraduate school. The college seniors are designated Sandoz Scholars and receive a scholarship and research support from the foundation grant.

#### **Eight Professors Awarded Emeritus Titles at Faculty Ceremonies**

A total of 222 years of combined academic service to Clemson University was recognized recently when eight professors were awarded emeritus titles at special faculty ceremonies.

Clifton W. Carter, retiring after 33 years, received the title of assistant professor emeritus of engineering graphics. A native of Walhalla, Carter taught in public schools in Ninety-Six before coming to Clemson as an instructor in drawing.

The title of professor emeritus of industrial engineering was awarded to Everett Laitala, who came to Clemson as head of industrial engineering in 1959. In 1968 Laitala was named the outstanding industrial engineer in the Carolinas, Virginia and West Virginia.

Retiring after 27 years, Claud W. Bolen was named professor emeritus of history. He is a native of Coalwood, W.Va., and is past president of the Clemson chapter of the American Association of University Professors.

Charles H. Watson, born in Cross Anchor, received the title of associate professor emeritus of English. He has taught at Clemson since 1946.

Henry T. Polk, who has the longest tenure of the group -- 36 years -- was named professor emeritus of chemistry. He is a native of Washington, D.C.

Thomas C. Peele, a native of Rich Square, N.C., was awarded the title of professor emeritus of agronomy and soils. He has been a soil scientist and professor of agronomy at Clemson since 1950.

Born in Pickens County, John B. Williams has served at the university for 30 years. He received the title of assistant professor emeritus of agricultural education.

The title of assistant professor of home economics was given to Cynthia V. Williford also retiring after 30 years. She is a Seneca native.

#### **Summer of '74 Begins With Reunion Weekend**

Summer of '74 steps off to a lively -- and somewhat busy -- pace this month when members and families of 26 classes return to campus for annual Reunion Weekend, June 7-9, sponsored by the Clemson Alumni Association.

Highlight of the weekend affair is the Alumni Family banquet in Harcombe Dining Hall Saturday, June 8, at 6:30 p.m., when five graduates will receive the Alumni Association's highest honor, Distinguished Alumni awards. They are George Chaplin (Class of 1935), editor-in-chief of the Honolulu (Hawaii) Advertiser; Thomas C. (Buck) Breazeal (1942), Knoxville, Tenn. insurance executive; U.S. Congressman Edward L. Young (1941) of Florence; and Taze L. Senn (1939), professor and head of the department of horticulture at Clemson.



The fifth award will be given posthumously to the late Robert W. Moorman (1940), professor and head of the department of engineering mechanics at the University.

Tickets for the banquet are \$5.50, and may be purchased in advance at the University Alumni Center or at reunion registration headquarters in the lobby of Manning Hall during that weekend.

Two important groups -- directors of the Clemson University Foundation and Alumni Association National Councilmen -- will convene Thursday evening (June 7) for a series of meetings relating to financial support programs of the University.

Other activities on Saturday (June 8) include a reception for wives of alumni and guests at the University Alumni Center, 11 a.m.; general assembly at Daniel Hall auditorium, 2 p.m.; and the Alumni Fashion Show in the Clemson Room of The Clemson House, 2:30 p.m.



**COLUMBIAN PRESENTS AWARD** -- William L. Mathias, left, manager of technical home furnishings with the Fibers Division of Allied Chemical Corp. in Columbia, presents a \$1,500 check from the Allied Chemical Foundation to President R.C. Edwards. The gift will support a scholarship in textile chemistry and one in textile engineering.

#### **Spring Issue of "The South Carolina Review" Publication Announced**

Publication of the spring issue of "The South Carolina Review" has been announced by the College of Liberal Arts and the English department.

The issue includes articles on Robert Lowell, Henry James and William Faulkner, as well as an interview with Thomas Wolfe's brother Fred of Spartanburg, sole surviving member of Wolfe's immediate family.

"Tom, Are You Listening?" recalls Fred's colorful memories of his famous writer-brother in the 1920's and 1930's.

"Review" is the only magazine in South Carolina devoted to both scholarly articles on literary subjects, and creative literature. Editors are Richard J. Calhoun, Robert W. Hill and William Koon of Clemson's English department faculty.

"Review" is published twice a year, in November and the spring. The November issues will feature articles on Robert Frost in honor of the centennial of the poet's birth.

The scope of the "Review" is not limited to South Carolina. The spring issue includes stories by Sandra Schor (New York) and Laurel Speer (Arizona), and poems by Laurence Lieberman (Illinois), Louis Phillips (New York), Joyce Odam and Lawrence Spingarn (California), Norman Nathan (Florida), Jack Lindeman (Pennsylvania), and Dale Bailes and David Tillinghast (Columbia, S.C.).

Subscription requests and manuscripts to be considered for publication should be sent to "The South Carolina Review," English Department.

#### **Wood Named Wildlife Ecologist in Belle W. Baruch Research Institute**

Gene W. Wood, 33-year-old native of Virginia, has been appointed assistant professor and forest wildlife ecologist in the Belle W. Baruch Research Institute of Clemson University.

Wood is the second member of a team of scientists who will join the institute in Georgetown.

He will participate in a major research project aimed at optimizing the natural productivity of the maritime forest.

Wood will be responsible for wildlife research in the project and will be studying the productivity and interrelationships of game and non-game birds and animals in relation to habitat manipulation under different forest management practices.

#### Home Sewing Center Booklet Available

Clemson University women who sew will be interested in a booklet recently completed by two Extension home economists on planning the home sewing center.

Home economics instructors Helen McMillan and Judith Kline have gathered dozens of helpful ideas which they have put into a booklet called "Planning for Your Sewing Needs."

"With a little ingenuity, the home sewer can turn a small closet or second-hand chest into a sewing center that will make her work a pleasure," promise Miss McMillan and Mrs. Kline.

The bulletin (No. 197) may be ordered from county Extension offices or from the Bulletin Room, 656-3261.

#### AFFIRMATIVE ACTION PLAN AND RELATED MANUALS AVAILABLE IN LIBRARY

Clemson University's Affirmative Action Plan, Personnel Manual, and Faculty Manual may be checked out at the reserve desk for use in the library only. Persons having questions or comments concerning these documents may call the affirmative action officer, Colonel E.N. Tyndall, 3413; the coordinator in the academic area, Dean S.M. Willis, 3181; or the coordinator in the nonacademic area, Mr. Ray L. Thompson, 2426.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974

Present: Robert C. Edwards, presiding; Victor Hurst, Melford A. Wilson, Stanley G. Nicholas, Walter T. Cox, Luther P. Anderson, H. Morris Cox, Charles R. Dillon, J. W. Gordon Gourlay, Claud B. Green, Geraldine Labecki, Harold F. Landrith, Melvin C. Long, Harlan E. McClure, W. H. Davis McGregor, A. E. Schwartz, W. D. Trevillian, Henry E. Vogel, Lyle C. Wilcox, S. M. Willis, and E. N. Tyndall, Secretary.

1. Minutes

The minutes of the meeting of April 1, 1974 were approved as submitted.

2. Curriculum Changes

Statement and Recommendation: The Dean of the University recommended additions, deletions and changes in the curricula, effective when designated on the appropriate Request for Approval forms as follows:

## I. COLLEGE OF EDUCATION

(A) New Undergraduate Courses

Educ 103	Study Techniques	1 cr. (0 and 3)
InEd 415	Construction Practices (Replaces InEd 315.)	3 cr. (2 and 3)

(B) New Graduate Course

InEd 615	Construction Practices	3 cr. (2 and 3)
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MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)

(A) New Undergraduate Courses

Econ 408	Arbitration	3 cr. (3 and 0)
LAW 312	Commercial Law (Replaces IM 312.)	3 cr. (3 and 0)
LAW 313	Commercial Law (Replaces IM 313.)	3 cr. (3 and 0)
LAW 322	Legal Environment of Business (Replaces IM 322.)	3 cr. (3 and 0)

(B) New Graduate Course

Econ 608	Arbitration	3 cr. (3 and 0)
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(C) Course Description Change

IM 499	Computer Programming II	1 cr. (0 and 3)
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III. COLLEGE OF PHYSICAL, MATHEMATICAL AND BIOLOGICAL SCIENCES

(A) New Undergraduate Courses

Bot 432	Plant Geography	3 cr. (2 and 3)
Bot 461	Cytology (Change in description and number only. Replaces Bot 404 and H404.)	4 cr. (3 and 2)
Ch 229	Organic Chemistry Laboratory	1 cr. (0 and 3)

(B) New Graduate Courses

Astr 701	Solar System Astronomy for High School Teachers (Replaces Astr 704.)	3 cr. (3 and 0)
Astr 711	Stellar Astronomy for High School Teachers	3 cr. (3 and 0)
Bot 632	Plant Geography	3 cr. (2 and 3)
Bot 661	Cytology (Replaces Bot 604.)	4 cr. (3 and 2)

Action: Approved.



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)3. Revision of the Medical Technology Curriculum

Statement and Recommendation: The Dean of the University recommended the following revision of the curriculum in Medical Technology. This revision will enable the student who is not accepted into a hospital school for the Medical Technology Program to pursue a major in chemistry or microbiology.

## MEDICAL TECHNOLOGY

## Freshman Year

<u>First Semester</u>		<u>Second Semester</u>	
Ch 101	Gen. Chemistry 4 (3, 3)	Ch 112	Gen. Chemistry 4 (3, 3)
Engl 101	Eng. Composition 3 (3, 0)	Engl 102	Eng. Comp. 3 (3, 0)
Math 106	Calculus of One Var 4 (4, 0)	Math 108	Cal. & Lin. Algebra 4 (4, 0)
M. T. 101	Intro. to Med. Tech. 1 (1, 0)	Bot 101	Plant Biology 3 (3, 0)
Zool 101	Animal Biology 3 (3, 0)	Bot 103	Plant Biology Lab 1 (0, 2)
Zool 103	Animal Biol. Lab 1 (0, 2)	or	
or		Zool 101	Animal Biology 3 (3, 0)
Bot 101	Plant Biology 3 (3, 0)	and	
and		Zool 103	Animal Biol. Lab 1 (0, 2)
Bot 103	Plant Biol. Lab 1 (0, 2)	Elective	3
Elective	1		
	<hr/> 17		<hr/> 18

## Sophomore Year

Ch 223	Organic Chem. 3 (3, 0)	Ch 224	Organic Chem. 3 (3, 0)
Ch 227	Organic Chem. Lab 1 (0, 3)	Ch 228	Organic Chem. Lab 1 (0, 3)
Micro 305	Gen. Microbiol. 4 (3, 3)	Gen 302	Genetics 4 (3, 3)
*Physics elective	3 or 4	*Physics elective	3 or 4
*Literature elective	3	*Literature elective	3
Hist 172	Western Civil. 3	Elective	3
	<hr/> 17 or 18		<hr/> 17 or 18

## Junior Year

Ch 313	Quan. Analysis 3 (3, 0)	*Option requirement	8
Ch 317	Quan. Anal. Lab 1 (0, 3)	*Humanities elective	3
*Option requirement	8	*Social Science elective	3
*Humanities elective	3	Elective	3
	<hr/> 15		<hr/> 17

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)

Senior Year

	<u>Credit Hours</u>	<u>Lecture Hours</u>	<u>Seminar Hours</u>	<u>Clinical Practice Hours</u>
Med. Tech. 401 Serology and Immunology	4	21	10	49
Med. Tech. 402 Microbiol.	7	59	6	470
Med. Tech. 403 Hematology	5	12	32	276
Med. Tech. 404 Blood Bank	3	8	20	132
Med. Tech. 407 Urinalysis	2	10	8	102
Med. Tech. 408 Chemistry	10	40	50	470
Med. Tech. 409 Radioisotopes	<u>1</u>	2	0	7
	32			

132 or 134 Total Semester Hours

(\*) To be chosen from courses required to complete an alternate degree should the student not be accepted to a hospital school after completion of the academic requirement for the baccalaureate degree in Medical Technology.

Action: Approved.

4. Statement on the Pre-Veterinary Medicine Program

Statement and Recommendation: The Dean of the University recommended approval of the following revised statement concerning the Pre-Veterinary Medicine Program. This statement will be included in the next edition of the Clemson University Announcements.

The curriculum in Pre-Veterinary Medicine is designed to meet the general admission requirements of certain colleges of veterinary medicine. Since the admission requirements are not uniform, students should consider the specific requirements of veterinary colleges when planning their programs. Under the Southern Regional Education Plan, 10 students from South Carolina may enter the College of Veterinary Medicine at the University of Georgia each year. Under this plan, students are exempt from out-of-state fees.

Students enrolled in the Pre-Veterinary Medicine curriculum at Clemson will transfer to a major in Animal Science, Dairy Science, Poultry Science, or Zoology before the end of the second semester of the freshman year to complete the three-year program. After two years in the program, students may apply to a college of veterinary medicine, but only the exceptional students are accepted after two years of college studies.

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)

After satisfactorily completing three years at Clemson University in one of the four majors listed above and after satisfactorily completing the freshman year in a college of veterinary medicine, a student may apply for a bachelor of science degree from Clemson University.

If a student is not accepted by a college of veterinary medicine after the second or third year of pre-veterinary studies, the requirements for a Bachelor of Science degree at Clemson may be completed in one of the four majors listed above.

Under the Southern Regional Education Plan, there is no limit on the number of times a student may apply for admission to a college of veterinary medicine.

Action: Approved.

5. University Grading System for Undergraduates

Statement and Recommendation: The Dean of the University recommended approval of the following:

1. That the current Pass-Fail Grading System be continued with a change in the maximum number of credit hours which may be taken Pass-Fail from 14 to 15 hours and that students be allowed to take courses in the major field above the major requirements on a Pass-Fail basis.
2. That additional steps be taken to acquaint students with the policy and its implementation as was done in 1970.
3. That the ABCDF grading system be continued in its present form.
4. That the preliminary grading system and the "Forgivable F" for first semester freshmen both be continued in their current form.

Action: Approved.

6. University Calendar 1975-76

Statement and Recommendation: The Dean of Student Affairs recommended that the following University Calendar for 1975-76 be approved:

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)

## CLEMSON UNIVERSITY CALENDAR 1975-76

## FALL SEMESTER

(74 Class Days)

August 18-19	Monday--Tuesday--Orientation, new students
August 20	Wednesday--Registration, all students
August 21	Thursday--Late registration
August 22	Friday--Late registration fee applies
August 22	Friday--Classes begin regular schedule
August 28	Thursday--Last day for registration
August 28	Thursday--Last day to add a subject
September 11	Thursday--Last day to order diploma for mid-year graduation
September 18	Thursday--Last day to drop a subject without record
October 13	Monday--Preliminary reports due
October 29	Wednesday--Last day to drop a subject or withdraw from the University without receiving final grades
November 10-14	Monday--Friday--Preregistration
November 26	Wednesday--Thanksgiving holidays begin after last class
December 1	Monday--Classes resume
December 8	Monday--Examinations begin
December 18	Thursday--Mid-year graduation



MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)

## SPRING SEMESTER

(72 Class Days)

January 5	Monday--Orientation, new students
January 6	Tuesday--Registration, all students
January 7	Wednesday--Late registration
January 8	Thursday--Late registration fee applies
January 8	Thursday--Classes begin regular schedule
January 14	Wednesday--Last day for registration
January 14	Wednesday--Last day to add a subject
January 28	Wednesday--Last day to order diploma for May graduation
February 4	Wednesday--Last day to drop a subject without record
March 1	Monday--Preliminary reports due
March 12	Friday--Last day to drop a subject or withdraw from the University without receiving final grades
March 12	Friday--Spring holidays begin after last class
March 22	Monday--Classes resume
April 7	Wednesday--Honors and Awards Day; classes suspended at 12 noon
April 12-16	Monday-Friday--Preregistration
April 26	Monday--Examinations begin
May 7	Friday--Commencement

MINUTES OF THE EDUCATIONAL COUNCIL MEETING, MAY 6, 1974 (Continued)

SUMMER SESSIONS 1976

(Classes meet Monday-Friday except as indicated)

(26 Class Days Each Session)

FIRST SESSION

May 17	Monday--Registration
May 18	Tuesday--Classes begin
June 23-24	Wednesday-Thursday--Examinations

SECOND SESSION

June 28	Monday--Orientation, new students
June 29	Tuesday--Registration
June 30	Wednesday--Classes begin
July 31	Saturday--Classes meet
August 4-5	Wednesday-Thursday--Examinations
August 7	Saturday--Graduation

Note: Easter falls on April 18 in 1976.

Action: Approved.

7. Provision for Voting

Statement and Recommendation: The Dean of Student Affairs recommended that adjustment of the University calendar for 1974-75 be made as necessary to permit students to vote in the primaries and the general election.

Action: Approved.

*E. N. Tyndall*  
E. N. Tyndall  
Secretary

GRADUATE COUNCIL MINUTES, APRIL 5, 1974

The Graduate Council met at 3:00 P.M. on Friday, April 5, 1974 in the Conference Room of E-103 Martin Hall. Dean Schwartz called the meeting to order. Those present were: Dr. Brown, Dr. Gahan, Dr. Camper, Dr. Freeze, Professor Means, Dr. Huffman (alternate for Dr. Gauthreaux), Dr. Edge (alternate for Dr. Dysart), Dr. Macaulay, Mr. Preston Brown, and Mr. James Kelley.

Dean Schwartz informed the Council of Dr. Brown's appointment as Assistant Dean of Graduate Studies effective July 1, 1974.

The minutes of the March 8, 1974 Graduate Council meeting were approved as distributed.

The following new courses and changes were approved:

College of Education

In Ed 615 - Construction Practices

College of Industrial Management and Textile Science

Econ 608 - Arbitration

College of Physical, Mathematical, and Biological Sciences

Astr 701 - Solar System Astronomy for High School Teachers  
Replaces Astr 704.

Astr 711 - Stellar Astronomy for High School Teachers

Bot 632 - Plant Geography

Bot 661 - Cytology (number and description change)

A report with recommendations concerning the proposed Doctor of Education in Occupational Education degree program was distributed. Dr. Gahan presented comments on behalf of the subcommittee. A motion was made to accept the report as information, seconded and approved.

Dean Schwartz distributed copies of the report, "Review of Selected Graduate Programs for the Period 1966-1972" which was sent to the Commission on Higher Education. Dean Schwartz answered questions and commented on the report. A motion was made, seconded, and approved to accept the report as information.

A motion was made, seconded and passed to adjourn.

MINUTES OF THE UNIVERSITY LIBRARY COMMITTEE MEETING, APRIL 8, 1974

Present: John R. Ray (Chairman), Hewitt D. Adams, Elizabeth B. Galloway, Ursula A. Holahan, Kenneth J. Russo, Donald B. Stafford, J. W. Gordon Gourlay (Secretary).

Visitors: Mrs. Dorothy C. Porter (Library), Mr. James R. Martin (Library).

Minutes of the meeting of March 11, 1974 were approved.

Memorandum from Dean C. B. Green relating to Recommendation of the University Library Committee Concerning Borrowing Privileges for Emeriti Faculty was discussed. It was the opinion of the Committee that it still thinks that it would be appropriate to provide Emeriti Faculty with this privilege but would not press the issue.

Revision of Library Rules: The Ad Hoc Committee to Consider Revision of Library Rules had met and had studied the suggestions by the library staff. While no formal action had been taken by the Ad Hoc Committee, there was general approval of the rules after some additions and deletions had been made.

The University Library Committee after some further revisions approved the attached Library Rules Governing Fines, Notices, and Delinquent and Privileged Borrowers.

Mr. Gourlay pointed out that this document would have to receive administrative approval before it could be put into effect.

Chairman Ray announced that this would be the last scheduled meeting of the University Library Committee until the fall semester. He thanked the members for their cooperation during the year.

J. W. Gordon Gourlay, Secretary  
University Library Committee



SENIOR FULBRIGHT-HAYS PROGRAM FOR 1975-76

The Council for International Exchange of Scholars (formerly the Committee on International Exchange of Persons) announces that applications are now being accepted for senior Fulbright-Hays awards for university lecturing and advanced research in over 75 countries during 1975-76. The booklet on the program for this period is available on request to the Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418, and it may be consulted at the office of the Chairman of the Faculty Fulbright Selection Committee, Professor Hugh Macaulay, 206 Sirrine Hall.

Application requirements include: U. S. citizenship; for lectureships, college or university teaching experience; for research awards, a doctorate or, in some fields, recognized professional standing as demonstrated by faculty rank, publications, compositions, exhibition record, etc. Some awards are open to application by advanced doctoral candidates.

July 1, 1974 is the deadline for applying for most of the announced research awards, and it is the suggested date for filing for lectureships.

Senior Fulbright-Hays awards generally consist of a maintenance allowance in local currency to cover normal living costs of the grantee and family while in residence abroad, and roundtrip travel for the grantee (transportation is not provided for dependents). For lecturers going to most non-European countries, the award includes a dollar supplement, subject to the availability of funds, or carries a stipend in dollars and foreign currency, the amount depending on the assignment, the lecturer's qualifications, salary, and other factors.

CIVIL ENGINEERING

Parviz F. Rad (Asst Prof) participated in "A Forum on Innovations in Low Cost Rural Housing" and inspected an experimental pole frame house in Romney, W. Va. on April 29-30. From there he went to Marinette, Wis. to observe the annual national meeting of "Students Against Fires" sponsored by Student Competitions on Relevant Engineering, Inc. He was also asked to attend the meeting of the Board of Directors of SCORE where energy was selected as the theme for next competition.

Subhash C. Anand (Assoc Prof) attended the Third National Meeting of the Universities Council on Earthquake Engineering Research (UCEER) which was held at the University of Michigan, Ann Arbor on May 9-10. This meeting was sponsored by the Earthquake Engineering Program on RANN Division of the National Science Foundation. About 75 speakers from various universities reported at this meeting on their current research efforts in earthquake engineering.

## AGRONOMY AND SOILS

A new textbook entitled Fertilizers: Food Producing Minerals and Chemicals, authored by U. S. Jones (Prof) and published by the Southern Printing Company, has been released. The text is designed for post high school students of agriculture, the earth sciences, and as a reference for the fertilizer industry. It is an introduction to the subject of production, marketing and use of fertilizers, agricultural limestone and other soil amendments.

## COLLEGE OF ENGINEERING

B. E. Gilliland (Asst to the Dean) participated in the 13th Annual Meeting of the Southern Interstate Nuclear Board, as a representative of the South Carolina Nuclear Advisory Council. The meeting was held in Charleston, May 12-15.

## CONTINUING ENGINEERING EDUCATION

On June 10-14, the first group of thirty-two superior high school students will be on campus to participate in the Workshop on Interactive Computing. This is the third year that these workshops have been held during the summer months, and the reception has been enthusiastic on each occasion. The students, if past experience is any indication, will work long and hard hours with a high level of interest as they use the computer to solve real world problems with their own personal computer terminals. The basic idea of the workshops is to familiarize students with this instrument that plays such a major role in modern society. Their enthusiasm normally grows as the week goes by -- grows to such an extent that they are willing and eager to work late in the evening to complete problems that have captured their interest. The fee required for these workshops has been greatly reduced through two scholarship programs initiated by the Institute of Electrical and Electronic Engineers. One of these scholarship programs has succeeded in reducing the fee for all registrants by \$25.00 while the second scholarship program has made available a number of \$25.00 merit scholarships. This second category is primarily through industry gifts which have been obtained through the efforts of the membership of the Institute of Electrical and Electronic Engineers. The instructor for these workshops is R. W. Snelsire (Assoc Prof) of Electrical and Computer Engineering. The workshops are sponsored by the Department of Electrical and Computer Engineering and administered by Continuing Engineering Education as a public service for the College of Engineering.

The one-week course entitled Introduction to Modeling the Eutrophication Process will be conducted on the Clemson University campus June 10-14 by L. G. Rich (Prof, Env Systems Engr) and A. R. Abernathy (Prof, Env Systems Engr). The short course is administered by Continuing Engineering Education. Attendance will be from regulatory and industrial personnel who will be using or interpreting the results from the next generation of water quality control models.

ELEMENTARY AND SECONDARY EDUCATION

Ralph K. Peden (Asst Prof) served as a workshop consultant for Greenville County elementary school science teachers at Sans Souci Elementary School.

Ralph K. Peden served on a Southern Association of Colleges and Schools Evaluation Team for Irmo High School.

ENTOMOLOGY AND ECONOMIC ZOOLOGY

Jay D. Hair (Asst Prof) was elected to the Board of Directors of the South Carolina Wildlife Federation at its annual meeting in Columbia on April 27. The State organization is an affiliate of the 3.1 million member National Wildlife Federation.

Rodney L. Holloway (Asst Prof) has been given a Grant-in-aid of \$300 by ICI America, Inc. for research with Primir for control of aphids on pecans.

T. R. Adkins (Prof) has been given a Grant-in-aid of \$2000 for research investigations on efficacy of Altosid IGR against horn fly larvae by Thuron Industries, Inc.

Rodney L. Holloway has been given a Grant-in-aid in the amount of \$500 for research with experimental insecticide S-2957 for control of peach and pecan insects by EM Laboratories.

A research grant of \$33,600 has been approved by the USDA Soil Conservation Service for Jay D. Hair (Asst Prof) to conduct an environmental assessment of the fish and wildlife of two watersheds in South Carolina.

Jay D. Hair attended and participated at the annual meeting of the National Wildlife Federation and the North American Wildlife and National Resources Conference in Denver, Colo., March 29 - April 3.

Gayle P. Noblet (Asst Prof) and Ray Noblet (Asst Prof) attended and participated in the meetings of the Southeastern Society of Parasitologists in Savannah, Ga., April 11.

ENVIRONMENTAL SYSTEMS ENGINEERING

John F. Andrews (Prof) and Richard A. Poduska (Tenn Eastman) were co-authors of a paper, "Dynamics of Nitrification in the Activated Sludge Process," presented at the 29th Annual Purdue Industrial Waste Conference, May 7-9.



## ENVIRONMENTAL SYSTEMS ENGINEERING (Continued)

John F. Andrews (Prof) was one of 20 persons from the U.S. and Japan who were invited to participate in the Second U.S.-Japan Seminar on Dynamics of Microbial Populations, May 5-10, University of Minnesota. The Seminar was sponsored by the National Science Foundation and was a follow-up to the First Seminar which was held in Japan in 1965. Dr. Andrews' paper was entitled, "Dynamics and Control of the Anaerobic Degradation of Organic Solids in Waste-water Treatment."

## FOOD SCIENCE

Donald M. Henricks (Assoc Prof) who is currently serving as chairman of the S. C. Nutrition Committee, participated in the annual meeting in Columbia, March 26-27. He was honored with a plaque for his service to the Committee during the past two years.

Donald M. Henricks is the co-author with Dale Handlin (Assoc Prof, Animal Sci) of a paper entitled, "Induction of Parturition in the Sow with Prostaglandin F<sub>2a</sub>" published in Theriogenology 1:35 (1974).

## HISTORY

E. M. Lander, Jr. (Alumni Prof) has published "The Palmetto Regiment Goes to Mexico," in the South Carolina Historical Association, Proceedings (1973).

## HOME ECONOMICS

Veronica Carmack (Asst Prof) participated in the first annual consumer seminar, May 2-3 in Beaufort County. This seminar was sponsored by the Beaufort County Council and the Beaufort Technical Education Center.

Frances Jordan (Assoc Prof) participated in the National Extension Family Life Specialists Workshop, May 6-10 in St. Louis, Mo.

## INTERDISCIPLINARY STUDIES

A. M. Weinstein (Asst Prof) was appointed Chairman of ASTM F-4 Committee section 4.20.8 on Properties of Recovered Surgical Implants at the General F-4 Meeting in Salt Lake City, Utah, May 8-10.



MATHEMATICAL SCIENCES

William H. Ruckle (Prof) has had the following articles published recently: "FK-spaces in which the sequence of coordinate vectors is bounded," Can. J. Math., 25(1973) p. 973. "Nuclear topologies on  $m$ ," (with A. B. Latimer and W. A. Strack), Bull de la Soc. Royale des Sci. de Liege, 42(1973), p. 81.

Austin J. Lemoine (Asst Prof) has had the following article published recently: "A simple proof of known result in random walk theory," Annals of Probability, 2(1974), p. 347.

The following faculty members attended and presented papers at the annual meeting of the Southeast Region of the Association of Computing Machinery which was held in Nashville, Tenn. on April 18-20.

Russell Schouest (Asst Prof) - "Coordinating VS2, HASP, TSO, FAST BATCH and TP Systems."

Ande Fedele (Lect) - "An Interpretive Terminal Independent Interface for Teleprocessing Applications."

John Peck (Asst Prof) - "A Macro Facility for Higher Level Languages."

Elizabeth Jones (Lect) - "FORTRAN - Based Input/Output Facility for Assembler Language."

James L. Flatt (Assoc Prof) served on the Visiting Committee of the Southern Association of High Schools on April 29-May 2, to evaluate Chapin High School.

Robert E. Fennell (Asst Prof) and T. G. Proctor (Assoc Prof) presented a joint paper entitled, "Bounds on Solutions of Perturbed Systems of Differential Equations," at the John Barrett Memorial Lectures, University of Tennessee on May 10.

John C. Peck (Asst Prof) presented a paper entitled, "A Public Health Data System," at the National Computer Conference in Chicago, Ill. on May 6. The paper was also published in the AFIPS Conference Proceedings, Vol. 43, p. 77.

Austin J. Lemoine (Asst Prof) has had the following articles published recently: "Approximations for the repairman problem with two repair facilities, II: Spares," (with D. L. Iglehart). Advances in Applied Probability 6(1974), p. 147. "Limit theorems for generalized single server queues," Advances in Applied Probability 6(1974), p. 159.

## POULTRY SCIENCE

B. W. Bierer (Prof) published "Exposing Turkeys by Various Routs to an Avirulent and Virulent Strains of Pastuerella Multocida: co-authored by W. T. Derieux (Vet II). Poultry Science 52: 2290-2298.

## PSYCHOLOGY

B. Caffrey (Assoc Prof and Hd) led a discussion and presented a paper on "Undergraduate Professional Programs in Psychology" at the meeting of Psychology Department Heads for the Southeastern Region in Atlanta, Ga. At the meeting of the Southeastern Psychological Association in Hollywood, Fla. on May 3, Dr. Caffrey presented a paper, "Psychology interest patterns of freshmen through senior psychology majors vs. other college students," and on May 3 he chaired a session on "Achievement, Anxiety, and their Correlates" and presented a paper, "Personality and academic success in high school vs. success in college."

Carol F. Brainerd (Asst Prof) presented a paper, "Fatigue and intellectual performance in the aged" at the meetings of the Gerontological Society in Miami, Fla.

Leonard Berger (Asst Prof) presented a paper, "Present and future effects of the federal selection guidelines on local governments and universities," at a program on Governmental intervention into employee selection, 1974 - The final phase: State and local governments including the university, which he organized and chaired at the meetings of the Southeastern Psychological Association in Hollywood, Fla. on May 2. Dr. Berger also presented a paper, "The relationship of student rater personality on teacher evaluations: Dogmatism" with Dr. Fred Steele of the Clemson University Counseling Center on May 4.

David J. Senn (Assoc Prof) chaired a session on "Attribution Theory in Social Psychology" and presented a paper on "Toughness in dyadic bargaining as influenced by payoff information, time pressure, and sex of bargainer" at the SEPA meetings on May 2-4.

David J. Marx (Asst Prof) and Laretta Park (Asst Prof) presented a paper, "Personal value systems and religious orientation of college students." Dr. Marx also presented a paper, "Relational judgments as a function of attitude, trait content, and objective reality" at the SEPA meetings on May 2-4.

N. Spurgeon Cole (Assoc Prof) presented a paper with D. K. Freeman (Redfern Health Center) at the meetings of the College Health Association in Dallas, Texas on April 5. The paper dealt with "A two-phased study to assess the effectiveness of a sleep-intervention program on academic success of college students."

## PHYSICS AND ASTRONOMY

P. B. Burt (Prof) published a paper entitled, "Solitary Waves in Nonlinear Field Theories," in Physical Review Letters, May 13, 1974, p. 1080.

P. B. Burt gave a colloquium at the University of Georgia, May 16. The talk was entitled "Particles of Fractional Baryon Number."

G. H. Foster (former Grad Stu) published a paper based on her doctoral dissertation in Acta Physica Polonica, Jan. 1974, p. 143 entitled, "Lagrangians for Massive, Arbitrary Spin Fields."

M. J. Skove (Alumni Prof) gave a talk entitled, "Microscopic Quantum Phenomena" at South Carolina State College at Orangeburg on May 3.

C. W. Ulbrich (Assoc Prof) had a paper published in Journal of Applied Meteorology, April 1974, entitled "Analysis of Doppler Radar Spectra of Hail."

## ZOOLOGY

On April 18, Sidney A. Gauthreaux, Jr. (Assoc Prof) presented a banquet address to the Texas Ornithological Society entitled, "Spring Trans-Gulf Migration Viewed with Radar."

The following papers were presented at the annual meeting of the Association of Southeastern Biologists in Savannah, Ga., April 17-20:

"Invertebrate Endocrine Structures as Viewed with the Scanning Electron Microscope," by Averett S. Tombes (Assoc Prof).

"A Modified Surber Sampler for Collecting Benthic Invertebrates in Shallow Streams," by R. W. Boyne (Grad Stu) and Byron R. Ingram (Asst Prof).

"Preliminary Results Obtained With a Modified Surber Sampler in a Shallow Stream by R. W. Boyne and Byron R. Ingram.

"The Embryonic Development of *Caretta caretta* (Reptilia: Cheloniidae) under Natural Conditions" by J. E. Cadle (Univ of Ga), D. Helms (Asst Prof) and E. Mattingly (Univ of Ga).

Sidney A. Gauthreaux visited the department of Psychology at Dalhousie University, Halifax, Nova Scotia, March 10-12. While there he presented a seminar entitled, "The Evolution of Bird Migration in Relation to Global Wind Patterns."

ZOOLOGY (Continued)

Byron R. Ingram (Asst Prof) has been appointed as a member of the Technical Advisory Committee to the South Carolina Heritage Trust Program. The Committee will advise on matters pertaining to the inventorying, evaluation, and protection of areas of natural and historical value in the state. The first meeting was held in Greenville on April 25.



## CALENDAR OF CAMPUS EVENTS

June 1, 1974

- 2-7 -- Tiger Basketball Camp for Boys first session: Youths from throughout the Southeast on campus to sharpen basketball skills. Open to all elementary and secondary school students. Fee of \$100.00 includes room and board. For further information contact the Athletic Department, 656-2101.
- 3-7 -- Professional Development Program: "Basic Textile Chemistry." Sponsored by the Office of Professional Development, College of Industrial Management and Textile Science (IM&TS). Sirrine Hall, 9:00 a.m.
- 4-7 -- Future Farmers of America State Convention. Sponsored by the Department of Agricultural Education. Daniel Hall Auditorium. Open to the public, admission free. Expected attendance 400 plus.
- 4-5 -- Professional Development Program: "Financial Management." Sponsored by the Office of Professional Development, College of IM&TS. Sirrine Hall, 9:00 a.m.
- 5-28 -- Art Exhibition: "Poems and Fibers." An unusual exhibit displaying the marriage of two separate art forms: poetry and fiber construction. Rudolph Lee Gallery, College of Architecture. Gallery open 9 - 4:30 p.m. weekdays.
- 6-9 -- Clemson's 77th Alumni Reunion. Nearly 1,000 graduates from 26 classes from throughout the state and nation return to the campus for nostalgia and an up-to-date look at Clemson and its new programs.
- 6 -- Professional Development Program: "Utilizing Transactional Analysis in Industry." Sponsored by the Office of Professional Development, College of IM&TS. Sirrine Hall, 9:00 a.m.
- 9-14 -- Tiger Basketball Camp for Boys, second session.
- 10-14 -- Workshop: "Computer Workshop for High School Students." A chance for students to learn what computers are, what they can do, and the basics of how to use them. Sponsored by the Office of Continuing Engineering Education. Open to high school students, admission \$50.
- 10-14 -- Horticulture Workshop: "Therapy through Horticulture: People and Plants Interacting." Demonstrations of horticultural techniques with applications in the areas of visual, mental and physical handicaps, crime, alcohol and drug abuse. Sponsored by the Department of Horticulture. Plant and Animal Science Building, 8:30 a.m. For further information contact Dr. T.L. Senn, Department of Horticulture, 656-3403.
- 10-21 -- Camp Alert, first session for ages 15 and older. A day camp for mentally retarded children and adults in Pickens County which features swimming, canoeing, sailing, cookouts, arts and crafts and trips to local points of interest. Sponsored by the Pickens County Association for Retarded Children and various other civic and charitable organizations. Conducted by Clemson's Department of Recreation and Parks Administration. YMCA Beach 9 - 2:00 p.m. weekdays. For further information contact the Department of Recreation and Parks Administration, 656-3400.

South Carolina Educational Radio Network (WEPR, 90.1-FM, Greenville).  
Programs produced at Clemson.

- 1 -- Political Science: Municipal Elections. With Dr. Ed Coulter Clemson Political Science Department and Don Gordon of Furman University. 6:30 p.m.
- 3&10 -- Shakespeare Scene-By-Scene: Othello. With Dr. Ray Barfield, Clemson English Department. 11:00 a.m. and 9:00 p.m.
- 4&11 -- Music From The Mountains: (4th) Love and Marriage, (11th) Christian Harmony Sings. With Edith Card, Clemson Music Department. 12:00 Noon and 7:45 p.m.
- 5&12 -- Environment '74: A two-part special geared toward recent graduates, focusing on Engineering Careers. 12:00 Noon and 7:45 p.m.
- 6&13 -- Poetry Today: (6th) Robinson Jeffers, (13th) D.H. Lawrence. With Dr. Robert W. Hill, Clemson English Department. 12:00 Noon and 7:45 p.m.
- 7&14 -- Food For Thought: (7th) Canning Can Be Fun -- and Save Money, Too, (14th) Freezing Berries and Fruits. With Marie Hindman, Clemson Home Economist. 12:00 Noon and 7:45 p.m.
- 7&14 -- Friday Lecture: (7th) The Importance of Brecht in European Literature. From the Clemson Language Department featuring BBC Drama Head Dr. Martin Esslen. (14th) Music and Commentary from The Threepenny Opera. 12:30 p.m.
- 7&14 -- The Time Has Come: (7th) Food Advertising and Packaging Around the World, (14th) Interview with Dr. Martin Esslen on Bertolt Brecht and Theatre of the Absurd. 1:30 p.m.
- 7,8&14 -- Majors and Minors: Dr. Ray Barfield continuing a special series of programs featuring works currently available on budget classical labels -- a species threatened with extinction. Friday - 2:00 p.m., Saturday - 10:30 p.m.
- 8 -- Film Fifteen: Part one of a two-part program on Music from the Cinema. Ross Cornwell and Bob Austin analyze the importance of the "the third actor" -- the musical score. 6:45 p.m.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

CLEMSON UNIVERSITY LIBRARY  
SOUTH CAROLINA ROOM

JUN 12 1974

Vol. 13 No. 20

June 15, 1974

## 74-75 Poole Alumni Scholarships Announced

Recipients of Clemson University's most prestigious academic scholarships, the F. Poole Alumni Scholarships, have been announced for the 1974-75 school year.

The four incoming freshmen are Kim Christy of Charleston, W. Robert Reynolds of Greenwood, Andrew M. Smith of Newberry and Suzanne E. Weaver of Morgantown, W. Va.

Each will receive a \$1,250 scholarship renewable each year if scholastic achievement remains satisfactory, making the award worth a total of \$5,000 for four years.

The scholarships are sponsored by the Clemson Alumni Association and are the university's most distinguished academic awards, granted to incoming freshmen who have achieved and show potential outstanding scholastic ability. Scholarship alone is the determining factor in the selections that honor the memory of Clemson's twentieth president, the late Robert F. Poole, chief administrator from 1940-58.

## Whitehurst Receives GAO Fellowship

Professor of industrial management at Clemson has received a one-year fellowship to work for the U.S. General Accounting Office (GAO) under the 1974 Federal Faculty Fellowship Program.

Clinton H. Whitehurst Jr., who is stepping down as head of Clemson's industrial management department, will leave June 20 for his year's assignment in Washington, D.C.

Headed by the Comptroller General, the GAO is an independent federal agency which is an investigative arm of Congress. Whitehurst explained that "any congressional committee or congressman who wants a study done on any matter goes to the GAO to have it done."

Whitehurst will be working with the Logistics and Communications Division of the GAO, in which he will be analyzing the sea-lift capabilities of the United States from the national defense standpoint.

Whitehurst will return to full-time teaching and research at Clemson next year.

## Taft Institute of Government Seminar in Progress

Clemson is holding its Robert A. Taft Institute of Government Seminar. The 10-day program which began June 10 is an intensive study of the American political system for 30 South Carolina secondary school teachers.

The 30 teachers, designated as Taft Fellows, received fellowships with all expenses paid.

They are meeting with 21 national, state and local political leaders and journalists for face-to-face, give-and-take discussions on the aspects and realities of government and politics.

"The seminar offers teachers a unique learning experience in practical politics, the two-party system and constitutional government," explains Clemson's program director Prof. Charles W. Dunn, head of the political science department.

"These sessions make the political system come alive for teachers and stimulate them

to return to teach their students how to work effectively and responsibly within the American political system," he says.

#### **British Professor to Study Clemson's Professional Development Programs**

British professor Lindsay D.S. Ramsay of Edinburgh, Scotland, has received a grant to study the on-going degree and the professional development programs offered by Clemson's industrial management department.

Ramsay, senior lecturer in the department of management of the Edinburgh College of Commerce, will be at Clemson from July 21 until Aug. 15.

"While visiting the United States in 1972, Professor Ramsay became familiar with the Clemson programs," said Dr. C.H. Whitehurst, head of Clemson's industrial management department.

Whitehurst said Ramsay was especially interested in the joint Clemson-Furman M.B. A. degree program and the department's resident Master of Science degree in Management.

"The funding of Mr. Ramsay's visit to Clemson is a further indication of this department's growing national and international reputation," said Whitehurst.

Ramsay's grant was funded by the Financial Times, the British Steel Corp., and other business organizations. Selection of grant recipients was made by the British Association of Teachers of Management.

#### **Guide to Flowering Annuals Booklet Now Available**

A colorful and useful booklet just produced by the Clemson Extension Service will be of interest to all Clemson University flower lovers. "Flowering Annuals for South Carolina" contains everything the gardener needs to know from preparing of the soil to drying the blossoms. An outstanding feature of the booklet is a fold down chart in easy-to-read form which lists pertinent information on the cultivation of selected annuals, including heights, best use, location and spacing.

The bulletin (No. EC 546) may be ordered from county Extension offices or from the Bulletin Room, 656-3261.



MINUTES OF THE SCHOLARSHIPS AND AWARDS COMMITTEE, MARCH 2, 1974

The Scholarships and Awards Committee met at 4:00 in Room E-103 Martin Hall with Chairman Corinne Sawyer presiding. Committee members absent were: Dean Coakley, Dean Delony, and Mr. Van Dinh.

Dr. Sawyer first called for the approval of the previous meeting's minutes as circulated, and they were so approved.

Dr. Sawyer then reported that administrative efforts to reclaim funds from a Carr Scholarship recipient, who did not, in the opinion of the Committee, qualify as a full-time student under the University definition as such, had been dropped at the suggestion of Admiral McDevitt, legal counsel for the University.

The next item of business proposed by Dr. Sawyer was a discussion of the designation of students as "Honors Students." Confusion had arisen because of the categories included in the designation, "Honors Students." Dr. Sawyer recommended adoption of the Honors Council suggestion that the term, "Dean's List," be applied to all students with a 3.0 GPR, and that the term, "Honors Students," be reserved for application to students participating in the honors program. The recommendation was adopted unanimously. It was further recommended by the Committee that, as a first item of business in the fall, the possibility of raising the 3.0 "floor" for Dean's List designation be discussed.

Full Committee approval of Collegiate Scholarship recommendations was the next item proposed. Motions for approval were preceded by a discussion of the possibility of raising the GPR level for the continued awarding of certain scholarships. It was decided that this was a matter to be handled by individual colleges. Individual collegiate representatives then moved, in turn, to accept the list of scholarship recommendations as proposed, and, in two cases, as amended by the Colleges of Engineering and of Physical, Mathematical and Biological Sciences; the motions were all seconded and carried.

The last two items of business included brief discussions of:

1. the possibility of a tie for the Faculty Medal, and it was decided that a duplicate award could be made;
2. procedure for the selection of the recipient of the Norris Medal, and it was decided that the selection would be made at this meeting, rather than later; the selection was made, however, subject to revision should circumstances later warrant. The selection was made by motion and carried unanimously.

There being no further business, the meeting was adjourned at 5:00 p.m.

Alfred L. Recoulley, Secretary

MINUTES OF THE HONORS COUNCIL MEETING, MARCH 5, 1974

The Honors Council meeting of March 5, 1974, was called to order at 4:00 p.m. Absent were Joseph Adair and Dean Kenneth Vickery. James Maxwell and David Van Lear, also unable to attend, sent substitutes to represent their respective colleges.

The Chairman began the meeting by reviewing the dropping enrollment in Honors during the past two years and circulating lists of students in each college (listed by department) who are eligible for Honors work by reason of a 3.0 GPR or better. There are 1,880 students, as of January, 1974, eligible to take Honors work; only 78 students are currently enrolled in Honors classes. Collegiate representatives on the Council were urged to make eligible students aware of the program and of its advantages, and to answer questions from students (the most frequent being about students' fears that they would do better in "easier" courses, in competition with less able students).

At the same time, Council members warned against the potential dangers in "overselling" Honors classes; in most departments upper division Honors work is tutorial in nature, demanding extra work of the teacher who agrees to take on Honors students. These teachers have a right to expect students who are indeed willing to study a subject in depth, who have genuine interest in subject matter as opposed to merely grades, and who are exciting and challenging to the teacher because of their intellectual curiosity and good preparation. Students who are cajoled into taking Honors work but who expect to coast into good grades, or who merely sign on Honors work to get in the good graces of a particular professor, are literally more trouble than they are worth to teachers who, in effect, are donating their extra time to the program.

Student representatives on the Council suggested that consideration be given to Honors courses which were totally different in both content and form from what is offered as part of the regular curriculum. In some cases this might mean courses in practice and in the field, in a discipline where class work is ordinarily largely theoretical. In other cases this might mean experimentation with new teaching methods, as for example, classes offered by means of PSI and by seminar, which might otherwise be traditional lecture-and-discussion courses. The students emphasized that to reward the student's investment in extra time, the course content must be rich and the material that which he could not gain in traditional class work; it insults the Honors student's sense of integrity to be given a project that is too easy and too undemanding.

It was emphasized in the meeting that many departments not now offering Honors work could profitably join the program; many have sufficient majors eligible for Honors to initiate particularly upper division Honors credits. The Council reviewed quickly the three general types of Honors work now offered at Clemson:

MINUTES OF THE HONORS COUNCIL MEETING, MARCH 5, 1974 (Continued)

1. multiple section classes in which certain sections are set aside for Honors students, and course content and objectives are redesigned for the special needs of the superior student;
2. traditional classes in which the Honors student works with regular students on all their projects, but for his Honors credit does extra projects, experiments, and/or reading in the subject area -- with tutorial sessions with his teacher; and
3. special classes (usually at the 300 or 400 levels) designed just for Honors students which offer subject matter not available elsewhere in the University, and usually offered only as student demand and interest are demonstrated -- designated each semester with the same number, but the course content and objectives varied each semester depending on student interest and teacher availability, to mention just two factors involved in scheduling.

The Chairman reiterated the view that the Honors program would function well and would grow only as the Council and the faculty at large believed in its overall objective: special education for special students, exactly as remedial work is offered for academically ill prepared students but emphasizing the unique needs of the academically gifted with superior academic preparation.

The meeting adjourned at 5:05 p.m.

AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

W. J. Lanham (Prof, on Extended Leave of Absence) was appointed Director of Coastal Plains Regional Commission on May 1, 1974. The Commission activities include economic programs and projects in the coastal plains region of North Carolina, South Carolina and Georgia. Also emphasis is directed to industrial development, marine resources, agriculture and forestry, and environmental affairs.

AGRICULTURAL ENGINEERING

Canadian Patent No. 943,347 was issued on March 12, 1974, on the mechanical peach harvester developed by B. K. Webb (Prof) and C. E. Hood (Assoc Prof). The patent has been assigned to the Research Corporation of New York. A U. S. patent was issued on the harvester in January 1973. Patent applications are pending in Great Britain and Australia.



## CHEMISTRY

Recent publication: D. Hindman and J. Jacobus (Assoc Prof), "Stereochemical Micellar Kinetic Differentiation: Facts or Artifacts?" Tetrahedron Letters, 1619 (1974).

## COLLEGE OF NURSING

Geraldine Labecki (Dean) received Associate Membership in The Foundation of Thanatology, a foundation devoted to scientific and humanistic inquiries as well as to the application of knowledge to the subjects of: the psychological aspects of dying, reactions to death, loss and grief, recovery from bereavement.

## CONTINUING ENGINEERING EDUCATION

A one-day course on Technical and Business Writing for Engineers will be held in Greenville on the Greenville Technical College campus on June 20, 1974. The participants will be instructed by C. O. Caskey (Assoc Prof of English), by Corinne H. Sawyer (Assoc Prof of English) and by H. W. Busching (Assoc Prof and Hd of Civil Engr). The short course is co-sponsored by the Department of Civil Engineering and the Department of English.

## DAIRY SCIENCE

A paper by B. F. Jenny (Assoc Prof), C. E. Polan, and F. W. Thye entitled "The Effects of High Grain Feeding and Stage of Lactation on Serum Insulin, Glucose, and Milk Fat Percentage in Lactating Cows" appeared in the Journal of Nutrition, 104:379, 1974.

## ECONOMICS

An article by Rodney Mabry (Asst Prof), Paul Zipin (Asst Prof) and Carl Dyer (Assoc Prof, Ind Mgt) entitled, "Crime Rates and Public Expenditures for Police Protection: A Comment," has been accepted for publication in the October issue of The Review of Social Economy.

Ralph Byrns (Asst Prof) participated in a conference on "Comparative Systems and Economic Development," at the Rocky Mountain Social Science Association Meeting in El Paso, Texas, April 25-27.



## ENVIRONMENTAL SYSTEMS ENGINEERING

J. F. Andrews (Prof) has had a review article published in the April 1974 issue of Water Research (G.B.) The article is entitled, "Dynamic Models and Control Strategies for Wastewater Treatment Processes."

J. F. Andrews is co-author of a paper entitled, "New COD Analysis Arrives" which was published in Water and Wastes Engineering, Vol. II, April 1974. The other co-authors are C. Geisler (Visit Asst Prof, 1973) and G. Schierjott (Heinr. Wostoff O. H. G., West Germany).

J. F. Andrews has had two papers published in the Proceedings of the Symposium on the Use of Mathematical Models in Water Pollution Control, University of Newcastle upon Tyne (England), April 1974. The titles of the papers are "Application of Some Systems Engineering Concepts and Tools to Water Pollution Control Systems," and "The Development of a Dynamic Model and Control Strategies for the Anaerobic Digestion Process."

J. F. Andrews and S. P. Graef (Clemson Ph.D., 1972) are the authors of a paper entitled "Stability and Control of Anaerobic Digestion," which was published in the Journal of the Water Pollution Control Federation, Vol. 46, April 1974.

A. Ray Abernathy (Prof) served as moderator for the Wednesday afternoon session of the Facilities Planning Workshop sponsored by the U.S. Environmental Protection Agency and the Water Pollution Control Federation in Atlanta on May 21-22.

Linvil G. Rich (Prof) and A. Ray Abernathy conducted a week-long workshop entitled "Introduction to Modeling the Eutrophication Process," June 10-14 as part of the Continuing Engineering Education program of the College of Engineering.

Linvil G. Rich has just been appointed to the Committee on Certification by Invitation of the American Academy of Environmental Engineers.

John H. Austin (Prof and Hd) is the principal investigator on a grant entitled, "Criteria for Establishment of Two Year Post High School Wastewater Technology Program," funded by the Environmental Protection Agency. The grant is in the amount of \$20,006 for the period Sept. 1, 1974 - August 31, 1975.

## ELEMENTARY AND SECONDARY EDUCATION

Frederick C. Raetsch (Asst Prof) participated in a discussion and presentation of "Right-to-Read Programs in South Carolina" at the International Reading Association meeting in New Orleans, La. on May 3.

## ENTOMOLOGY AND ECONOMIC ZOOLOGY

Merle Shepard (Asst Prof) and Van Waddill (Grad Res Asst) attended and participated in a conference for computer modelling of insect populations in soybeans at N.C. State University, Raleigh, N.C., May 14-16.

Michael J. Sullivan (Asst Prof, Edisto Station) went to Porto Allegro, Brazil to harvest seeds of soybeans resistant to the Mexican bean beetle, May 4-18. Resistance was developed in S.C. and plantings were made in Brazil in 1973. In February 1974 the lines were evaluated for agronomic qualities and insect resistance. The production of seed in Brazil will speed up development and subsequent release of resistant line to S.C. growers.

S. B. Hays (Prof and Hd) went to Atlanta, May 22 and 23 to attend and participate in an IRS-4 meeting on pesticides used in Agriculture.

## FOOD SCIENCE

Ya-li Liu (Grad Res Asst) and R. F. Borgman (Prof) presented a paper entitled "Development and Behavior of Rats as Influenced by Perinatal Dietary Fats" at the meeting of the Federation of American Societies for Experimental Biology, Atlantic City, N.J., April 7-12.

J. J. Jen (Asst Prof) presented two papers entitled "Spectral Quality of Light and Pigment Systems of Ripening Tomatoes" and, with V. A. Paynter (Grad Res Asst), "Pectic Enzymes in Ripening Peaches Infected with Monilinia fructicola" at the annual meeting of the Institute of Food Technologists in New Orleans, May 13-15. Dr. Jen also served as vice-chairman of a "Plant Biochemistry" technical papers session.

M. G. Johnson (Asst Prof) served as chairman of a symposium of the Food Microbiology Division of the Institute of Food Technologists annual meeting in New Orleans, May 13-15.

The following papers were presented at the annual meeting of the American Society for Microbiology in Chicago, Ill., May 14-15:

H. W. Findley, Jr. (Grad Res Asst) and M. G. Johnson (Asst Prof), "Effect of Number of Generations of Growth in Continuous Culture on Sporulation Frequency of Clostridium perfringens."

W. M. Gray (Grad Res Asst) and M. G. Johnson, "Isolation and Characterization of Obligate Anaerobes from Cheddar and German Hard Cheeses."

P. J. Baab (Grad Res Asst) and M. G. Johnson, "Resistance of Vibrio parahaemolyticus to Sub-Lethal Heat When Grown in Batch and Continuous Cultures."

### INDUSTRIAL EDUCATION

W. E. West (Assoc Prof) was program chairman for the Spring Conference of the South Carolina Vocational Association, April 26, in Columbia.

W. E. West has been elected President of the South Carolina Vocational Association for the 1974-1975 academic year.

### INDUSTRIAL MANAGEMENT

E. Earl Burch (Assoc Prof) had an article, "Productivity: Its Meaning and Measurement" published in the May-June 1974 issue of the Atlanta Economic Review.

E. Earl Burch and William R. Henry (Ga State Univ) had a reply, "Institutional Contributions to Scholarly Journals of Business: A Reply," accepted for publication in the Journal of Business.

### INTERDISCIPLINARY STUDIES

Myron Spector (Asst Prof) presided over a session of the Southeast Electron Microscope Society Meeting at Chapel Hill, N.C. on May 17-18 and presented a paper entitled, "High Resolution Electron Microscope Study of Biological Apatites."

The National Institute of Dental Research has announced a grant in the amount of \$5,000 to the Division of Interdisciplinary Studies, College of Engineering. The grant is to support the Clemson University Symposium relating to the selection of materials for reconstructive surgery.

Jerome J. Klawitter (Assoc Prof) attended the 1974 meeting of the Societe' belge de Chirurgie Orthopedique et de Traumatologie in Brussels, Belgium as an invited speaker. Dr. Klawitter presented a paper entitled, "The Status of Tissue Growth into Porous Materials as a Method of Obtaining Direct Skeletal Attachment of Orthopedic Implant Prostheses."

### PHYSICS SUMMER INSTITUTE

Thirty senior high school teachers of physics are participants in a summer institute aimed at assisting schools and teachers implement a recently developed physics course, Project Physics, for high school students. Most of the participants are committed to encourage and assist the implementation of Project Physics. The institute is sponsored by the National Science Foundation and is being directed by F. J. Keller (Assoc Prof) and W. E. Gettys (Prof). In addition, Mrs. Sara Andrews the physics teacher at A. C. Flora High School in Columbia is on the institute staff. Mrs. Andrews is an experienced and successful teacher of high school physics and has special expertise in the Project Physics. The duration of the institute is eight weeks.

### POLITICAL SCIENCE AND SOCIOLOGY

Harold E. Albert (Assoc Prof) published a review of Who Shakes the Money Tree? American Campaign Financing Practices from 1789 to the Present, by George Thayer, which appeared in Choice, May 1974, Vol. 11, No. 3.

### PROFESSIONAL DEVELOPMENT OFFICE

W. C. Whitten, Jr. (Prof, Econ) is chairman for a Short Course, "Capital Expenditures Analysis" which will be held in Sirrine Hall, June 18-20. The program is co-sponsored by the Department of Economics and the College of Industrial Management and Textile Science through the Professional Development Office.

"Supervisory Management: A Systematic Approach" is the title of a three-day program to be held in the College of Industrial Management and Textile Science, June 25-27. E. Earl Burch (Assoc Prof, Ind Mgt) is the chairman.

Leonard Berger (Asst Prof, Psychology) will be the chairman for two courses to be offered in the College of Industrial Management and Textile Science: "Basic Wage and Salary Administration" will be held on July 9 and "Increasing Employee Loyalty" will be held on July 11. These programs are co-sponsored by the College of Liberal Arts and the College of Industrial Management and Textile Science.

J. A. Turner, Jr. (Assoc Prof, Acct) will be the chairman for a course, "Fiduciary Accounting," to be held in Sirrine Hall on July 11. This is a cooperative program with the South Carolina Association of Certified Public Accountants and the American Institute of Certified Public Accountants.



TEXTILE DEPARTMENT

E. I. Stearns (Prof and Hd) was chairman for a session of the Inter-Society Color Council in New York on April 30. The subject for discussion was "The Development of Color from Concept to Reality."

ZOOLOGY

H. S. Min (Prof) served as chairman of the Animal Physiology Session at the Association of Southeastern Biologists meeting in Savannah, Ga., April 17-20. Dr. Min co-authored a paper with H. G. Kohne (Grad Stu) and J. E. Jones (Assoc Prof of Poultry Sci) of the Animal Physiology program. The paper, which was presented by H. J. Kohne, was entitled, "Effect of Acute Hyperthermia on the Electrolyte Levels of Blood Plasma and Cardiac Muscle in the Domestic Turkey."

## CALENDAR OF CAMPUS EVENTS

- 15 -- Graduate Record Examination, M101 Martin Hall, 8:00 a.m.
- 15 -- Graduate School Foreign Language Test, M101 Martin Hall, 1:00 p.m.
- 16 -- Tiger Basketball Camp for Boys third session: Youths from throughout the Southeast on campus to sharpen basketball skills. Open to all elementary and secondary school students. Fee of \$100 includes room and board. For further information contact the Athletic Department, 656-2101.
- 17-21 -- Workshop: "Computer Workshop for High School Students." A chance for students to learn what computers are, what they can do, and the basics of how to use them. Sponsored by the Office of Continuing Engineering Education. Open to high school students, admission \$50.
- 23-28 -- Tiger Basketball Camp for Boys, fourth session.
- 24-5 -- Camp Alert, second session for ages 12 and under. A day camp for mentally retarded children in Pickens County which features swimming, canoeing, sailing, cookouts, arts and crafts and trips to local points of interest. Sponsored by the Pickens County Association for Retarded Children and various other civic and charitable organizations. Conducted by Clemson's Department of Recreation and Parks Administration. YMCA Beach 9-2:00 p.m. weekdays. For further information contact the Department of Recreation and Parks Administration, 656-3400.
- 26-27 -- Exams

South Carolina Educational Radio Network  
(WEPR, 90.1-FM, Greenville).

Programs produced at Clemson.

- 15,22&29 -- Film Fifteen: Music from the Cinema. Ross Cornwell and Bob Austin analyze the importance of "the third actor" -- the musical score. 6:45 p.m.
- 15,18&22 -- Political Science: A three-part special on Campaign Financing. With Dr. Ed Coulter, Clemson Political Science Department and Barbara Montgomery, Clemson League of Women Voters. 6:30 p.m.
- 17&24 -- Shakespeare Scene-By-Scene: Othello. With Dr. Ray Barfield, Clemson English Department. 11:00 a.m. and 9:00 p.m.
- 18&25 -- Music From The Mountains: (18th) Herbs and Things, (25th) Mountain Music Holiday. With Edith Card, Clemson Music Department. 12:00 Noon and 7:45 p.m.
- 19&26 -- Environment '74. A two-part special on Environmental Folk Songs with Paul Ott, National Wildlife Federation and new host Henry Cheney. 12:00 Noon and 7:45 p.m.
- 20&27 -- Poetry Today: (20th) e.e. cummings, (27th) Karl Shapiro. With Dr. Robert W. Hill, Clemson English Department. 12:00 Noon and 7:45 p.m.
- 21&28 -- Food For Thought: (21st) Zero in on Freezing Vegetables, (28th) The Fun Foods -- Jams, Jellies and Preserves. With Marie Hindman, Clemson Home Economist. 12:00 Noon and 7:45 p.m.
- 21 -- The Time Has Come: Spare Parts for the Body. With guest Silas N. Braley. 1:30 p.m.
- 21&28 -- Majors and Minors: Dr. Ray Barfield continuing a special series of programs featuring works currently available on budget classical labels -- a series threatened with extinction. 2:00 p.m.
- 22-29 -- Majors and Minors with Dr. Ray Barfield. 10:30 p.m.
- 29 -- Political Science: Chile and the Allende Overthrow. Clemson Political Science Professor Mary J. Martz guests. 6:30 p.m.







### **PROCEDURES FOR SUBMITTING NEWSLETTER MATERIAL**

All Calendar items of campus events (speakers, films, meetings, seminars, sporting events, etc.) should be submitted by written memorandum directly to the Office of Public Relations, Trustee House. Information and news items from the Office of the President, Vice President for Business and Finance, Vice President for Executive Affairs, Vice President for Student Affairs and the Vice President for Development should be submitted by written memorandum to the Office of Public Relations, Trustee House. Information and news items from all areas under the Vice President for Academic Affairs should be submitted by written memorandum to Dr. Claud B. Green, Room E-102, Martin Hall.

The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 21

SOUTH CAROLINA ROOM

July 1, 1974

JUN 28 1974

## College of IM&TS Receives \$78,000

The J.E. Sirrine Textile Foundation of Greenville has contributed \$78,000 for the next academic year to help support Clemson University's educational programs in the College of Industrial Management and Textile Science.

The announcement of the contribution was made by William F. Robertson of Greenville, president of the foundation. Since 1947 the foundation has allocated almost \$1.5-million to Clemson for textile education.

The funds provide for scholarships and fellowships for outstanding students, a program to reward student achievement, development of a personalized instruction laboratory, and two J.E. Sirrine professorships.

Other projects include seminars for high school counselors, publication of the journal "Clemson University Review," editing of textbooks for post-high school education in textiles, and the creation and maintenance of the J.E. Sirrine Textile Library on the campus.

"The programs supported have been very effective," said Robertson, "and are essential to the continued high quality of education existing within the College of Industrial Management and Textile Science.

The J.E. Sirrine Textile Foundation is pleased to announce that contributions for 1974-75 are substantially increased, over 33 per cent."

Allace D. Trevillian, dean of the college, noted the foundation's support is more meaningful than ever because of tight education budgets.

"Through the years the J.E. Sirrine Textile Foundation's support has been germane to the development of quality educational programs within the college," he said.

## Farrell Brown Named Assistant Dean of Graduate Studies

A new position has been created and filled in Clemson University's office of graduate studies and university research. Effective July 1, Prof. Farrell B. Brown will be the assistant dean of graduate studies.

Brown has been the assistant to the dean for two years.

Prof. Arnold E. Schwartz, dean of graduate studies and university research, said Brown's duties will be expanded and he will "play a greater policy making role in graduate school activities as assistant dean." He added that Brown "will be responsible for the day-to-day operations of the graduate school."

Brown received his B.S. from Lenoir Rhyne College, N.C., in 1957 and his M.S. (1959) and Ph.D. (1962) from the University of Tennessee.

At Clemson, Brown was assistant professor of chemistry from 1963-67, associate professor of chemistry from 1967-73 and has been a professor of chemistry since 1973.

In addition to fulfilling the responsibilities of his new position, Brown will remain active in the teaching and research programs of the department of chemistry and geology.

**First Alumni Directory  
in 34 Years Now Available**

The first published alumni directory in 34 years is now being distributed by the Clemson University Alumni Association.

The 401-page catalog of former Clemson students lists the alumni first alphabetically with addresses, then geographically

by states and cities, and then alphabetically by classes.

The book contains the current address of approximately 24,000 former students and lists at the proper alphabetical position those known former students for whom no address is available.

The directory is available through the Alumni Office, Alumni Center, 656-2345.



MINUTES OF THE UNIVERSITY EXTENSION COUNCIL, APRIL 26, 1974

The University Extension Council met at 2:00 p.m. in E-103 Martin Hall with the following present: Dr. Nelson R. Bauld, Jr., Professor W. C. Capel, Ms. Janis Hunter (for Mrs. Lillian Goldberg), Mr. Herbert D. Marett, Dr. Myrton Packer, Professor Eugene Park, Professor Suzanne Parks, Professor Julia B. Taylor, Professor Jim Washburn, Professor George von Tungeln. Dean Sam M. Willis presided.

Continuing Education Center: A progress report was provided by Dean Willis, for the information of the group, pertaining to the proposed continuing education center.

The group was informed that the Planning Committee had submitted a report outlining the felt necessities for the center to President Edwards. The Building Committee has been appointed by the President. Dean Willis will serve as a member of the Building Committee. Mr. Wilson initiated the appropriate procedures as outlined by the Budget Control Board and related administrative groups to secure architectural bids. An architectural Selection Committee has been appointed to screen, select, and recommend an architect. After review and consideration of the many to be considered, three have been recommended by this Committee to the President.

The Planning Committee has not been dissolved, but will remain to serve as needed for additional input in facility development. Several interest groups have special requests for consideration. It was noted that this facility is for general use, hence, not specific to needs of any one group within the University. Some further decisions may be necessary in determining what is to be included in the structure, related to funds available.

Extension Council of the National Association of State Universities and Land Grant Colleges: Dean Willis shared with the group some of the main points of interest from the meeting of the National Association held in Denver.

The Extension Council of the National Association is recommending continued and increased funding for Title I (Community Service-Continuing Education). Interest is in having increased real funding for general continuing education available for all member agencies.

The technical utilization committee and legislative committee are working on a proposal for one hundred fifty million dollars for a type of "Urban Smith Lever Act", providing funding for this general extension similar to that existing for Agricultural Extension.

MINUTES OF THE UNIVERSITY EXTENSION COUNCIL (continued)

It was voted to recommend consideration to the National Association of endorsement of the C.E.U. in line with the National Task Force on C.E.U.'s. Two representatives talked to the group about this. Interest was expressed from outside of the Southern Association about what is being done within the Southern Association regarding the C.E.U.

It was of interest to note one of the same issues of concern expressed within our University Council was an expressed concern of the National group: the concern of F.T.E. and C.E.U.

Conference of the Southern Association: A session was held at Georgia Institute of Technology March 6, 7, and 8, 1974 on, "The Place of C.E.U. in Higher Education."

The participants were encouraged to review the criteria for awarding individual C.E.U.'s and item four was emphasized: Are the target groups to be served included in the planning of the educational programs?

Ad Hoc Committee Report: The Ad Hoc Committee "Report to the Clemson University Extension Council Regarding Additional Recommendations with Respect to Continuing Education Unit," prepared by Professor George von Tungeln, Chairman, Dr. Nelson R. Bauld, and Professor Fred T. Simon had been previously distributed to the council members for review and study.

Additional information had become available to the council regarding the guideline provided by the Commission on Colleges of the Southern Association of Colleges and Schools. It was felt supplemental focus should be provided in the University Policy to incorporate consideration of this material. This was effected via the Ad Hoc Committee.

The report was reviewed and discussed.

Discussion of institutional C.E.U.: This was one of the main points for consideration which the Ad Hoc Committee had been asked to review. It was revised upon discussion to state page 2, item b be changed to read:

"The Dean of University Extension should be responsible for approving the records of institutional C.E.U. programs and transmitting these to the registrar's office for maintaining records of institutional activity in this area."

MINUTES OF THE UNIVERSITY EXTENSION COUNCIL (continued)

Page 3, paragraph one, was discussed. It was the general consensus of the group that this council would like to have no transfer of the C.E.U. to academic credit. This was agreed to be left as stated in the report of the Ad Hoc Committee, maintaining the policy currently reflected on page 104 of the Clemson University Catalog.

With the expressed revision, the motion was made by Professor von Tungeln, that the report be accepted by the council. This was seconded by Dr. Bauld. Motion was unanimously passed.

Affirmative Action Plan: Dean Willis indicated that the Affirmative Action Plan had been completed and distributed to the Deans and Department Heads within the University.

After some discussion the meeting was adjourned at 3:10 p.m.

Members absent: Dr. John Fulton, Dr. George D. Kessler, Professor C. N. Nolan, Professor F. T. Simon.

Suzanne Parks  
Secretary

Sam M. Willis  
Chairman

BIOCHEMISTRY

J. M. Shively (Prof and Hd) chaired a symposium entitled, "Inclusions of Autotrophic Microbes" and made a presentation entitled, "Carboxysomes (Polyhedral bodies): Their Role in Carbon Dioxide Fixation" at the annual meeting for American Society for Microbiology in Chicago, May 12-17.

J. M. Shively presented a paper entitled, "Ribulose 1, 5-diphosphate Carboxylase of Thiobacillus neapolitanus" at the joint meeting of the Biophysical Society and the American Society of Biological Chemists in Minneapolis, June 2-7.

Gary L. Powell (Assoc Prof) gave a paper entitled, "Rate of Cyclopropane Fatty Acid Synthesis in Amino Acid Starved Stringent and Relaxed Strains of Escherichia coli" (abstract no. 646) at the joint meeting of the Biophysical Society and the American Society of Biological Chemists in Minneapolis, June 2-7. Co-authors were O. Yazar and C. W. Walker, graduate students in the Chemistry Dept.

J. K. Zimmerman (Asst Prof) gave a poster session "Kinetically Controlled Reactions on Gel Chromatography: Computer Simulations" at the joint meeting of the Biophysical Society and the American Society of Biological Chemists in Minneapolis, June 2-7.

## BOTANY

The Botany Department was represented at the annual meeting of the S. C. Academy of Science on March 28-29 at Coker College, Hartsville, as follows:

C. R. Dillon (Asst Prof) chaired a paper session on Botany.

Papers presented: J. H. Rodgers, Jr. (Grad Stu) and C. R. Dillon: "A Comparative Study of the Primary Productivity of Limnetic Phytoplankton, Periphyton, and Benthic Macrophytes in Lake Keowee.

J. H. Rodgers, Jr., C. R. Dillon, and R. S. Harvey (DuPont Savannah River Lab, Aiken): "A Preliminary Report on the Effects of Temperature Elevation and Current on Periphyton Production in Natural and Artificial Streams."

J. N. Knox (Grad Stu) and J. E. Fairey III (Asst Prof): "A Floristic Study of a Granite-Gneiss Outcrop in the Upper Piedmont of South Carolina."

R. W. Gettman (Grad Stu) and J. E. Fairey III: "Floristic Studies in Sumter National Forest, Oconee County, South Carolina."

Several representatives of the Botany Department were participants in the annual meeting of the Association of Southeastern Biologists on April 17-19 in Savannah, Ga.

C. R. Dillon chaired a paper session on "Aquatic Ecology."

Papers were presented by the following:

John H. Rodgers, Jr. and C. R. Dillon: "Thermal Effects on Primary Productivity of Limnetic Phytoplankton, Periphyton and Benthic Macrophytes."

J. H. Rodgers, Jr., C. R. Dillon and R. S. Harvey: "Effects of Current and Temperature Elevation on Periphyton Production in Natural and Artificial Streams."

J. E. Fairey III: "Range Extensions for the Genus Scleria (Cyperaceae) in North America."

R. W. Gettman and J. E. Fairey III: "Floristic Survey of Sumter National Forest, Oconee County, South Carolina."

J. S. Boswell, Jr. (Grad Stu), C. J. Umphlett (Prof and Hd), and T. M. McInnis, Jr. (Asst Prof): "Zoospore Production from Axenic Cultures of the Mosquito Parasite, Lagenidium giganteum (Oomycetes)."



BOTANY (Continued)

J. H. Rodgers, Jr. and J. B. Grace (Grad Stu) attended a symposium on "Mineral Cycling in the Southeast" held April 30 - May 5 in Augusta, Ga. The symposium was sponsored by the Savannah River Ecology Laboratory and the U. S. Atomic Energy Commission.

CIVIL ENGINEERING

Parviz F. Rad (Asst Prof) had a research report, which he had co-authored with Richard C. Olson of Twin Cities Mining Research Center, published as Bureau of Mines Report of Investigations #7882 titled, "Size Distribution of Rock Fragment Produced by Rolling Disk Cutters."

Parviz F. Rad was elected to the membership of the Association of Asphalt Paving Technologists.

A research report titled, "Tunnelling Machine Research -- Interaction Between Disk-cutter Grooves in Rocks," prepared by Parviz F. Rad and Richard C. Olson was published in May as Bureau of Mines Report of Investigations #7881.

Subhash C. Anand (Asst Prof) is the co-author with Dr. Vijay K. Garg (Electromotive Division, G.M., Lagrange, Ill) and Prof. Philip G. Hodge, Jr. (Univ of Minn) of a paper which was presented at the Seventh U. S. National Congress of Applied Mechanics, held at the University of Colorado, Boulder, Colo. on June 3-7. The title of the paper was "Elastic Plastic Analysis of a Wheel Rolling on a Rigid Track."

The department of Civil Engineering and the English department co-sponsored a course in technical writing in Greenville on June 20. Claire O. Caskey (Assoc Prof) and Corinne H. Sawyer (Assoc Prof) were instructors for this course.

Jerald P. Peterson (former Grad Stu of Chem Engr), Walter E. Castro (Prof of Mech Engr), Paul B. Zielinski (Assoc Prof of Civil Engr) and William Beckwith (Assoc Prof of Chem Engr) had an article entitled, "Enhanced Dispersion in Drag Reducing Open Channel Flow," in the Journal of the Hydraulics Division, The American Society of Civil Engineers, in the June 1974 issue.

DAIRY SCIENCE

G. E. Gramling (Assoc Prof) received a Research Proposal sponsored by the Upjohn Company entitled, "Hydroxycholecalciferol for Milk Fever Prevention."

G. D. O'Dell (Assoc Prof) received a Research Proposal sponsored by the Syntex Corporation entitled, "Rate of Disappearance of a Subcutaneously Injected Prostaglandin Analog."

## COLLEGE OF ARCHITECTURE

Robert England (Assoc Prof) is author of a chapter in Studies in Mediaeval Culture (Medieval Institute, 1974). The chapter is entitled "The Statute of Provisors of 1351."

M. David Egan (Assoc Prof) attended the 87th meeting of the Acoustical Society of America in New York City, April 23-24 and was elected to serve a two year term, 1974-76 as Secretary, Technical Council on Architectural Acoustics of the Acoustical Society of America.

M. David Egan presented lectures in the annual continuing education short-course on architectural acoustics at the Georgia Institute of Technology attended by architects, and engineers from six southeastern states, May 31 and June 1.

## COLLEGE OF ENGINEERING

L. C. Wilcox (Dean) has been selected by the Southern Association of Colleges and Schools to serve as a member of the evaluation team for the coming year. Dean Wilcox will review programs in engineering and university research. One of the first visits was held during the month of June on the Tennessee Technological University campus in Cookeville, Tenn.

B. E. Gilliland (Asst to the Dean) participated in the Southeastern Seminar on Environmental Radiation Surveillance as a representative of the South Carolina Nuclear Advisory Council. The seminar was held on June 18-20 in Columbia.

## COLLEGE OF NURSING

Arline M. Duvall (Assoc Prof) presented a paper entitled, "Available Tools in Providing Public Health Nursing Service" to the Public Health Nursing Section, Southern Branch, American Public Health Association in Norfolk, Va. on May 8.

Gwen Lee (Assoc Prof) visited the Center for Health Research at Wayne State University on May 30. Several faculty were interviewed regarding the research carried out in cooperation with the Center.

Geraldine Labecki (Dean) chaired the Undergraduate Committee meetings at the Southern Regional Education Board's Nursing Curriculum Project in West Palm Beach, Fla., May 26-29.

A graduate program leading to the master of science degree in family health nursing was approved by the South Carolina Commission on Higher Education for initiation in 1974-75. The program offers the student an opportunity also to select one of six clinical specialties and nursing education.

ELECTRICAL AND COMPUTER ENGINEERING

J. W. Lathrop (Prof), Anil Gupta (former Grad Stu), and W. A. Porter (Texas A&M) are the authors of a paper entitled, "Defect Analysis and Yield Degradation of Integrated Circuits," published in the IEEE Journal of Solid State Circuits, V. SC-9, No. 3, pp. 96-103, June 1974.

ENGLISH

Janice Sargent (Instr in Speech) presented, at the recent meeting of the Southern Speech Communication Association in Richmond, a paper, "A Humanistic Approach to Human Communication Theory." The co-author was Prof. Larry Baker of Florida State University.

INTERDISCIPLINARY STUDIES

L. J. Bearden (Ph.D. Candidate in Bioengr) has been awarded a \$10,000 Postdoctoral Research Fellowship by the National Institute for Dental Research to continue his studies of "Interaction of Mammalian Cells with the Corrosion Products of Prosthetic Alloys" at Clemson University.

The following papers were presented at the 82nd Annual Conference of the American Society of Engineering Education, held at Rensselaer Polytechnic Institute, Troy, N.Y., June 17-20:

F. W. Cooke (Assoc Prof and Hd): "Future Needs for Bioengineers."

J. J. Klawitter (Assoc Prof): "Presenting Engineering Principles to Pre-Med Students."

MECHANICAL ENGINEERING

D. W. Bradbury (Prof) presented the paper, "Biomechanics Education" at the 82nd Annual Conference of the American Society of Engineering Education, held at Rensselaer Polytechnic Institute, Troy, N.Y., June 17-20.

## CALENDAR OF CAMPUS EVENTS

- 1 -- Orientation, New Students.
- 2 -- Registration, second session Summer School.
- 3 -- Classes Begin.
- 3-15 -- Exhibition: Architectural Thesis Exhibition 1974. An exhibit of projects that represent the culmination of six years of architectural design studies at Clemson. Rudolph Lee Gallery, College of Architecture. Gallery open 9 - 4:30 p.m. weekdays.
- 7-12 -- Tiger Basketball Camp for Girls, first session: Youths from throughout the Southeast on campus to sharpen basketball skills. Open to all elementary and secondary school students. Fee of \$100 includes room and board. For further information contact the Athletic Department, 656-2101.
- 8-12 -- Workshop: "Computer Workshop for High School Students." A chance for students to learn what computers are, what they can do, and the basics of how to use them. Sponsored by the Office of Continuing Engineering Education. Open to high school students, admission \$50.
- 8-12 -- Horticulture Workshop: "Therapy through Horticulture: People and Plants Interacting." Demonstrations of horticultural techniques with applications in the areas of visual, mental and physical handicaps, crime, alcohol and drug abuse. Sponsored by the Department of Horticulture. Plant and Animal Science Building, 8:30 a.m. For further information contact Dr. T. L. Senn, Department of Horticulture, 656-3403.
- 14 -- Tiger Basketball Camp for Girls, second session.



## WEPR Highlights

South Carolina Education Radio Network programs produced at Clemson are aired by WEPR, 90.1-FM, Greenville and WSCI, 89.3-FM, Charleston.

- 1&8 -- Shakespeare Scene-By-Scene: (1st) concluding Othello, (8th) beginning Comedy of Errors, with Dr. Ray Barfield, Clemson English Department, 11:00 a.m. and 9:00 p.m.
- 2&9 -- Music From The Mountains: (2nd) Singin' Billy Walker, (9th) Singing Schools. With Edith Card, Clemson Music Department. 12:00 Noon and 7:45 p.m.
- 5&10 -- Environment '74: (3rd) South Carolina Wildlife, with Dr. Ben Dysart, Environmental Systems Engineering, (10th) Natural Vacations, with Hurley Batters, Pendleton Historical and Recreation Foundation. Host, Henry Cheney. 12 Noon and 7:45 p.m.
- 5&11 -- Poetry Today: (4th) Poetry in the Schools, guest Dale Bailes, (11th) Longfellow, with Dr. Robert W. Hill, Clemson English Department. 12:00 Noon and 7:45 p.m.
- 5&12 -- Food for Thought: (5th) Safe Food On-the-go, (12th) Food Storage. With Marie Hindman, Clemson Extension Service. 12:00 Noon and 7:45 p.m.
- 5&13 -- Political Issues: Weekly review of government and politics, with Dr. Martin Slann, Clemson Political Science Department. 6:30 p.m.
- 6&14 -- Daily Carolina Weathervane: Agricultural weather, recommendations, county agent and commodity reports, with staff of Clemson Extension Service, Experiment Station and National Weather Service Office. 12:15 p.m.

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The following deadlines prevail: Items to appear in the Newsletter published the 1st of each month must be submitted by the 20th of the previous month; items to appear in the Newsletter published the 15th of each month must be submitted by the 5th of each month.

# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

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SOUTH CAROLINA ROOM

Vol. 13 No. 22

July 15, 1974

JUL 12 1974

## College of Nursing Receives Grants for Construction of Health Education Center

Two federal grants totaling almost \$2.2-million have been awarded to Clemson University toward construction of a multi-purpose center for its College of Nursing.

Announcement of the awards was made from Washington, D.C., office of U. S. Sen. Strom Thurmond.

The grants -- \$2,025,646 from the National Institutes of Health (NIH) and \$170,136 from the Appalachian Regional Commission -- will finance 63 per cent of the proposed \$3.5-million building. The NIH grant is the largest federal construction grant ever received by Clemson.

The new five-story, 73,000 sq.-ft. facility will launch a major educational health-care program in the six-county Piedmont area, which contains more than 25 per cent of the state's population. It will also serve as a nursing education center for the entire state.

The building will house Clemson's associate (two-year) and bachelor degree programs in nursing and the college's expansion into a graduate program, and a continuing professional education program for South Carolina nurses, the first such comprehensive program in the state.

The structure will be built on the east campus, adjacent to a planned biological sciences building, on land previously occupied by a 70-year-old student infirmary. Estimated completion date is the fall of 1977.

In addition to providing enrollment ex-

pansion and continued updating in technological advances, the new nursing facility will be the center for a variety of innovative teaching and community service programs.

## Clemson Announces Publication of "Journal of Political Science"

Clemson University has announced publication of its first issue of the "Journal of Political Science," the official journal of the S.C. Political Science Association.

Previously published in mimeographed form by the University of South Carolina, the journal is now a bound, printed magazine under the editorship of Clemson's political science department. Prof. Martin Slann is editor of the biannual publication.

Clemson is now one of only a handful of universities to hold the editorship of a professional political science journal. According to Slann, the journal makes interesting reading for the general public, as well as persons interested in political science.

The first issue includes an introduction by the president of the American Political Science Association, Avery Leiserson, and articles from five prominent political scientists throughout the country.

Subscription requests and manuscripts submissions for the "Journal of Political Science" should be sent to Martin Slann, Department of Political Science and Sociology, 412 Strode Tower.

## MINUTES OF THE MEETING OF THE FACULTY SENATE, MAY 14, 1974

President Dillon called the meeting to order at 4:16 p.m. He called attention to some errors in the minutes of the April 9 meeting: on page 1, third paragraph, last word, Department should be Development; on page 2, fourth paragraph, delete last sentence. The minutes were approved incorporating these changes.

President Dillon commented on the March 12 minutes which have been approved but need correcting: on page 5, fifth paragraph, President Fulton reporting on March 8 meeting of the Graduate Council . . . the Council had considered a policy whereby "All on-campus University employees may satisfy residence requirements by completing fifteen (15) semester hours of graduate credit during a twelve months' period." Dr. Camper, a member of this Council, advised that this applied only to those enrolled in magisterial programs. There is the possibility of a ruling on Doctoral programs later.

On page 4, second paragraph, relative to providing additional parking spaces, Vice-President Nicholas has received complaints that possibly additional trees would be removed in enlarging the parking lot in front of Long Hall. He stated that only one 10-foot holly tree would be removed and that there was no intention to use the wooded area to the west of Mrs. Poole's house for parking. The statement actually referred to parking on Mell Street rather than development of a new lot. He also stated that he is in full sympathy with all persons who are concerned about the removal of trees on campus and wishes to reiterate that, in the development of the campus, there will be no removal of any trees other than those which it is absolutely necessary to remove.

President Dillon announced that the following Senators will serve as alternates: Ray Barfield for A. L. Recoulley, Jacques Macy for L. E. Seamon, Richard Saunders for J. Y. LeBourgeois.

### Committee Reports

Research - G. D. O'Dell, no report.

Admissions and Scholarship - L. T. Fitch, no report.

Welfare - W. Baron reported that the Welfare Committee is involved with the following three issues: TIAA, optional retirement system; leave policy for 12-month faculty; reduced fee system for families of faculty.

Policy - C. W. Roberts. The policy committee met in executive session on Monday May 6th. Consideration of agenda items resulted in the following recommendations:



MINUTES OF THE MEETING OF THE FACULTY SENATE, MAY 14, 1974 (Continued)

1. President Dillon will be requested to appoint an ad hoc committee to further the drafting of the proper form for and to define the proper use of the results of a faculty evaluation of Academic Administrators.
2. The chairman of the Policy Committee will continue investigating the possible implementation of the concept of Centralized Registration of students with Dean Vickery and other concerned persons.
3. The questions raised by the application of \$28,715,397 of Revenue Sharing funds to the State Retirement System is referred to the Welfare Committee.
4. The Policy Committee invites written comment on paragraph 2 (a), page 27 of the Manual for Faculty Members - Appointments for which tenure is attainable. This invitation is directed to all faculty and especially to the Senators. Please address the comments to Prof. A. H. Holt, 804 Strode Tower.
5. A draft resolution amending the term of office of Senators was discussed and the Policy Committee will continue to study.
  - a) Alternate suggestions for solving the problem of the loss of outstanding officers are invited.

President's Report

President Dillon reported that the Undergraduate Council at its meeting on April 12 had received as information the report from the Committee on General Education requirements and Distinction between B.S. and A.B. Degrees. Departmental and college curriculum committees will review and report to the college deans who will in turn forward their report to Dean Green by October 1, 1974. The committee report on Class Attendance Policy was returned to the committee for further consideration. The Pre-Veterinary Science Curriculum is being modified, and the students involved will transfer to majors in Animal Science, Dairy Science, Poultry Science or Zoology before the end of the second semester of their freshman year. Each student who satisfactorily completes three years at Clemson and is then accepted by a Veterinary School and satisfactorily completes one year at that school may apply the B.S. degree from Clemson. Dean Vickery reporting on the Grading Policy recommended that the number of hours that can be taken Pass-Fail has been increased from 14 to 15 hours, and that students will be allowed to take courses in their major over those required on a Pass-Fail basis. He also requested that ABCDF grades, midterm grading and forgivable F for first semester freshmen be continued. The Study Committee on Improvement of Undergraduate Teaching is developing an evaluation form to be used for faculty evaluation by students. It was proposed that the information not be used for decisions on tenure, salary, or

4

MINUTES OF THE MEETING OF THE FACULTY SENATE, MAY 14, 1974 (Continued)

promotion. The information is to be used only for computerizing student evaluation. Confidentiality will be assured and the rating will be returned only to the instructor along with his mean score, the departmental mean, the college mean and the university mean. President Dillon reported that he did not attend the meeting of the Undergraduate Council which was held on May 3.

At the Planning Council's meeting on April 16, President Dillon reported, the University Master Planner, Professor Eflin, outlined a new statewide policy for selecting the architect for the Continuing Education Building. There is a proposal to study a system of directional and identification signs for the University, area ID, building ID, directional, and regulatory.

The Planning Council asked for an updated report on the development of the proposed student-faculty-staff recreational area on Lake Hartwell which will be located to the left of the road at the bridge.

President Dillon announced that the AFSC does not meet during the summer.

President Dillon stated that at the Educational Council meeting on May 6 President Edwards reported that the Review of Graduate Programs called for by the CHE has been published and delivered. President Edwards discussed the SCRS and TIAA-CREI at length covering many facets; he definitely supports the program, but he does not expect any action until possibly 1975. President Edwards stated that the Affirmative Action Plan will be delivered to HEW next week. This is a fairly large report and he expressed concern over the expense of this type of undertaking; and suggested that funds be requested to cover future projects of this magnitude. President Edwards announced that the CHE approved three new undergraduate programs: Community and Rural Development, College of Agricultural Sciences; B.S. in Economics, College of Industrial Management and Textile Science; Actuarial Science, College of Physical, Mathematical, and Biological Sciences.

President Dillon stated that he did not attend the Graduate Council meeting.

President Dillon reported that at the April 15 meeting of the Advisory Committee the following Senate Committees were structured:

Admissions and Scholarship Committee

L. T. Fitch *	C. B. Russell
O. J. Jacobus	G. C. Skelley
J. Y. LeBourgeois	M. A. Teklits
E. L. Powers	A. S. Tombes

\* Committee Chairmen

MINUTES OF THE MEETING OF THE FACULTY SENATE, MAY 14, 1974 (Continued)Policy Committee

R. T. Benson  
J. A. Chisman  
H. J. Grove  
F. H. Hedden  
A. H. Holt  
A. L. Recoulley  
C. W. Roberts \*  
L. E. Seamon (E. P. Arnold)

Research Committee

J. C. Acton  
B. B. Bookmyer  
B. L. Edge  
D. O. Ezell  
J. G. Goree  
K. A. Holleman  
G. D. O'Dell \*  
W. Witcher

Welfare Committee

W. Baron \*  
V. D. Carmack  
R. L. Cross  
P. T. Holmes  
R. J. Knapp  
J. E. Matthews  
J. D. Maxwell  
C. Triche III

President Dillon announced that the Advisory Committee will meet on Tuesday, May 28, 3:00 p.m. in 114 Kinard Hall to select Faculty Senate representatives to the Landscape and Site Development Committee and the Traffic and Parking Committee. He recommended that no changes be made in the present Ad Hoc Committees if present members agree to serve, except that a Senate representative should be added to the Committee on Faculty Evaluation of Administrators.

A discussion on the setting up of the Research Council revealed that the Faculty Research Committee and not the Senate Research Committee will be abolished.

President Dillon has requested that the Faculty Senate Secretary pull and have typed and assembled in a loose leaf notebook all resolutions from 1973-74 giving the resolution and number, Senate action pass/fail with votes recorded, and administration action as to whether it was accepted or rejected.

President Dillon announced that the Faculty Senate will continue to meet on the second Tuesday of each month at 4:15 p.m. in the second floor auditorium in Olin Hall. Actual meeting dates are as follows:



MINUTES OF THE MEETING OF THE FACULTY SENATE, MAY 14, 1974 (Continued)

May 14, 1974

June 11

July 9

August 21

September 10

October 8

November 12

December 10

January 14, 1975

February 11

March 11

April 8

Committee chairmen should plan committee meetings sufficiently in advance of the Senate meeting to permit forthcoming resolutions to be received by the president in time for inclusion on the agenda. The agenda will be mailed one week prior to the Senate meeting.

President Dillon announced that there will be a monthly luncheon meeting of the Senate officers and chairmen of the standing committees at 12:00 noon each Monday prior to the Senate meeting.

President Dillon suggested that committees work on the following items:

Policy - Investigate the voice that faculty members have in selecting the selection committee for administrators.

Research - Begin working on those sections of the Faculty Manual which are out of date, i.e., rewrite the sections on Tax Sheltered Annuities (p. 59) and SCRS (p. 52). Review the manual, make it a loose leaf document. Clarify the responsibilities of the 9-month faculty members.

A discussion ensued as to the effectiveness of the Faculty Senate and how this body is viewed by both the Administration and the Faculty. Suggestions were made as to how the Faculty Senate might be more effective. The Senate is interested in what the Administration has to say. The Senate would appreciate receiving in writing reasons for the rejection of resolutions.

There being no further business, the meeting adjourned at 5:50 p.m.

Respectfully submitted,

T. R. Adkins, Jr., Secretary

Members absent: G. D. O'Dell, M. A. Teklits, A. S. Tombes, O. J. Jacobus



## CHEMICAL ENGINEERING

Eastman Kodak Company through its Columbia-based Carolina Eastman Company awarded a \$4,000 research grant to the Chemical Engineering Department under its 1974 Educational Aid Program. Clemson is one of 40 colleges and universities in the country to receive such aid. Eastman Kodak contributions to graduate departments of chemistry, physics and engineering will total \$326,000 this year. During the past decade approximately \$35-million has been contributed to nearly 600 institutions.

## CIVIL ENGINEERING

The department of Civil Engineering has received a surplus ER-55 Stereoscopic Plotter from the U.S. Geological Survey. The plotter is valued at approximately \$7,500 and will be used for compiling topographic maps from aerial photographs for both teaching and research applications.

Donald B. Stafford (Assoc Prof) and James T. Ligon (Prof, Ag Eng) have received approval from the Water Resources Research Institute for the research project, "Locating Areas of High Groundwater Potential in the Piedmont Region by Aerial Remote Sensing Techniques." The project funded for \$12,491 will be conducted during the 1974-75 fiscal year.

Albert G. Law (Assoc Prof), James T. Ligon and Thomas V. Wilson (Prof, Ag Eng) have received approval for their research project, "Estimating Water Yield from Southern Piedmont Watersheds." This project has been funded for \$20,000 for the 1974-75 fiscal year by the Agricultural Research Service of the U.S. Department of Agriculture.

Parviz F. Rad (Asst Prof) had his article entitled, "Correlation of Laboratory Cutting Data with Tunnel Boring Machine Performance," published as U.S. Bureau of Mines Report of Investigation #7883.

Billy L. Edge (Assoc Prof) will receive funding for a one-year period by the Water Resources Research Institute for the project entitled, "Evaluation of the Ecosystem Response in a Reservoir Influenced by Heated Discharges and Pumped Storage Operation."

## COLLEGE OF EDUCATION

M. A. Packer, Coordinator of Educational Services, will return to full-time teaching duties in August and D. H. Pate will assume responsibility for College of Education off-campus programs, teacher certification and the placement of graduates. The offices of Educational Services have been moved to room 204, Tillman Hall.

## ENTOMOLOGY AND ECONOMIC ZOOLOGY

G. R. Carner (Asst Prof) went to the University of Arizona, Tempe, June 15-20 to attend and participate in the planning sessions of the Pathology Committee of the NSF/IBP soybean project. Also, he attended the annual meetings of the Society for Invertebrate Pathology.

E. W. King (Prof) attended and participated in the conference, "Protein and the World Food Situation" in Raleigh, N.C., June 5-7.

H. A. Loyacano (Asst Prof) attended and participated in the S-83 RRP annual meeting in Tifton, Ga., June 5-8.

T. R. Adkins (Prof) attended and participated in a conference-work shop on biting flies at Greenville and Stoneville, Miss., June 11-15.

S. G. Turnipseed (Prof, Edisto Station) attended and participated in a meeting of the principal investigators of the NSF/IPB program in Raleigh, June 9-11.

Rodney L. Holloway (Asst Prof) attended and participated in a conference with officials of the Department of Entomology, Smithsonian Institute, on the use of synthetic sex attractants in peach insect management programs, in Washington, D.C., June 25-28.

## ENVIRONMENTAL SYSTEMS ENGINEERING

A. R. Abernathy (Prof) spoke on June 26 to the 90 high school students on campus for the Conservation Workshop and directed them on a tour of the Anderson, S.C. Big Generostee Wastewater Treatment Plant.

J. F. Andrews (Prof) presented a paper entitled, "The Role of the Professional Engineer in Treatment Plant Operations," to the Illinois Section, American Society of Civil Engineers, Chicago Engineers Club, June 21.

J. A. Austin (Prof and Hd) has been awarded a \$20,000 grant from the U.S. Environmental Protection Agency. This grant is a continuation of a project, first awarded in 1970, entitled "Criteria for the Establishment and Maintenance of Two-Year Post High School Wastewater Technology Training Programs." The project will continue the development and implementation of a national two-year wastewater technology training program.

## INTERDISCIPLINARY STUDIES

A. M. Weinstein (Asst Prof) was elected to the Executive Committee of the Old South Chapter of the American Society for Metals for 1974-75.

MECHANICAL ENGINEERING

J. Charles Hester (Assoc Dean) has been elected to serve as the 1974-75 Chairman of the 3500-man Mechanical Engineering Division of the American Society for Engineering Education. Dr. Hester was elected at the annual meeting of the Society held June 17-21 at Rensselaer Polytechnic Institute, Troy, N.Y.

D. W. Cott (Asst Prof) has been awarded a \$19,393 contract from Duke Power Company. The contract objectives are to study ways to modify power system cycling to accommodate the impact of nuclear generation in the Duke Power system.

PROFESSIONAL DEVELOPMENT OFFICE

Leonard Berger (Asst Prof, Psych) will be the chairman for 3 Professional Development Programs during the month of July. They are as follows: July 16 - "Government Guidelines on Selection of Employees," July 17 - "Effective Interviewing Workshop," and July 18 - "Advanced Techniques in Personnel Selection." These courses are co-sponsored by the College of Industrial Management and Textile Science and the College of Liberal Arts.

Evans LaRoche (Prof, Ind Mgt) and E. A. Vaughn (Assoc Prof, Text Sci) will be lecturers in a program, "Textile Testing and Quality Control," July 23-25. The course will be held in Sirrine Hall and is sponsored by the Office of Professional Development and the College of Industrial Management and Textile Science.

E. A. Vaughn will be the chairman for a "Nonwoven Fabrics Forum" to be held in Sirrine Hall, July 30 - Aug. 1. The program is in cooperation with the College of Industrial Management and Textile Science.

E. S. Olson (Assoc Prof, Text Chem) is the chairman for a course, "Chemistry of Dyeing." This program is co-sponsored by the Office of Professional Development and the College of Industrial Management and Textile Science and will be held in Sirrine Hall, Aug. 13-15.

E. A. Vaughn will be the chairman for two yarn manufacturing courses, "Fundamentals of Yarn Manufacturing," Aug. 5-7, and "Advances in Yarn and Fabric Formation," Aug. 8-9 to be held in Sirrine Hall. These programs are co-sponsored by the College of Industrial Management and Textile Science and the Office of Professional Development.

TEXTILE DEPARTMENT

Donald W. Lyons (Assoc Prof) received notification from the National Institute of Occupational Safety and Health of the award of a grant of \$105,000 to support the development of an undergraduate training program in occupational safety and health.

## COMMUNICATIONS CENTER

Harry Durham, director of the Communications Center, has been elected to the board of trustees of a new national education association being formed here.

The organization is temporarily designated AAC-ACPRA, which results from the merger of the American Alumni Council and the American College Public Relations Association. It will serve almost 2,000 educational institutions.

Areas to be served by the organization include alumni affairs, public relations, news and information services, publications, radio-television services, development and fund raising, and government relations.



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- 15-31 -- Exhibition: Architectural Thesis Exhibition 1974. An exhibit of projects that represent the culmination of six years of architectural design studies at Clemson. Rudolph Lee Gallery, College of Architecture. Gallery open 9 - 4:30 p.m. weekdays.
- 30 -- State 4-H Conference. Registration 1:00 p.m., Young Hall. Open to all 4-H members and agents. For further information contact the 4-H Office, Tillman Hall, 656-3420. Expected enrollment 400-500.

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- 16,23&30 -- Music From The Mountains: (16) More Mountain Music Holiday, (23) John Jacob Niles - Folklore Collecting, (30) Mountain Music Family Style. With Edith Card, Clemson Music Department. 12:00 Noon and 7:45 p.m.
- 19&26 -- Food For Thought: (19) How Children Learn About Food, (26) Put Munch in Their Meals. With Marie Hindman, Clemson Extension Service and Rose Davis, Pee Dee Experiment Station.
- 20&27 -- Political Science: Dialogues from the Robert A. Taft Institute of Government seminars, Clemson Political Science Department. 6:30 p.m.
- 31 -- Environment '74: Foothills Art Festival. With Henry Cheney and George Vadney. 12:00 Noon and 7:45 p.m.
- Daily -- Carolina Weathervane: Agricultural weather, recommendations, county agent and commodity reports, with staff of Clemson Extension Service, Experiment Station and National Weather Service Office. 12:15 p.m.

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# CLEMSON UNIVERSITY

INFORMATION FOR THE FACULTY AND STAFF OF CLEMSON UNIVERSITY

Vol. 13 No. 23

CLEMSON UNIVERSITY  
SOUTH CAROLINA ROOM

August 1, 1974

## Textiles Department Receives \$475,000 Flammability Research Grant

New research begins in South Carolina this month that could give the American consumer greater protection against the flammability hazards of popular cotton-polyester apparel fabrics.

The federal government is financing the two-year project with the largest research grant ever received by the department of textiles at Clemson University--\$475,000.

The elusive object of the new investigation is a flame retardant chemical treatment for cotton-polyester that would be acceptable to the public and also economically practical for textile mills.

Thomas D. Efland, director of research in the College of Industrial Management and Textile Science, said the increased research effort for textile fibers and fabrics with improved resistance to flaming is being spurred by several factors.

Efland said there is greater general awareness today of the serious hazards which textile-related fires pose to both life and property. He said this concern is supported by figures which show that fires associated with flammable fabrics alone cause nearly 300,000 injuries a year, and the associated medical costs run into hundreds of millions of dollars.

Efland said the technology already exists to make cotton-polyester flame resistant, but consumers would not like garments cut from the treated fabric. The necessity of using large amounts of the flame retardant additive often results in poor physical and aesthetic properties in the finished fabrics.

Efland said that in recent years textile research has developed acceptable indi-

vidual flame retardants for the natural fiber cotton and the man-made polyester fiber, results which have meant a significant increase in consumer safety.

The two different fibers behave entirely differently, however, when combined into cotton-polyester blends, said Efland, and the flammability problem becomes a concern again. A satisfactory flame retardant treatment has yet to be developed because of this completely different nature of the two fibers.

Efland said the Clemson research has the potential to make a significant impact not only on South Carolina's textile industry, but also on the safety of consumers nationwide.

"If this project results in a suitable flame retardant for cotton-polyester," he explained, "the federal government will likely use the information as the technological base to establish reasonable standards for the flammability of selected items of apparel normally made of cotton-polyester blend fabrics."

In South Carolina, where one of every two yards of textile fabric is finished, the project could provide the industry with the technology necessary to meet these pending regulations, Efland said.

The project has three distinct stages and will involve much more than research alone. The textile industry will be extensively involved in the last two phases, running pilot plant trials on flame retardant finishes with commercial potential.

The most promising finishes will be used in a full-scale commercial run of fabric in a textile mill, fabric which will go to garment cutters for use in consumer apparel.



Besides research and development groups from industry, the team approach concept of the project will bring in the expertise of the University of Maryland's department of textiles and clothing, the Camille Dreyfus Laboratory, Research Triangle Institute, Durham, N.C., and the Southern Regional Research Center of the U.S. Department of Agriculture, New Orleans, La.

Industries include American Enka Co., Hooker Chemical Co., Niagara Fallas, N.Y., and the United Merchants and Manufacturers at Greenville, where the final commercial run of fabric will be made for consumer use.

The grant is from the U.S. Department of Commerce through the Experimental Technology Incentives Program (ETIP), which is attempting to find new ways to increase the commercial use of the output of government funded civilian research and development efforts.

The project itself will be an experiment in new approaches to federal government participation in funding civilian research and development where the government is not a primary user of the end product of the research, and where industry is under the threat of new federal regulations.

### **Agronomy Professor Publishes Book**

A new textbook entitled Fertilizers: Food Producing Minerals and Chemicals authored by Dr. U.S. Jones (Prof.) and published by the Southern Printing Company has been released. The text is designed for post high school students of agriculture, the earth sciences, and as a reference for the fertilizer industry. It is an introduction to subject of production, marketing and use of fertilizers, agricultural limestone and other soil amendments. The ideas and concepts expressed in this book are the results of 25 years of experience in teaching fertilizers and soils and working with the agricultural chemical industry.

### **Clemson Establishes Three New Under Graduate Programs.**

Three new undergraduate programs have been established at Clemson University to help beef up the state's manpower supply for important emerging professions.

The new programs are in mathematics, economics, and agricultural economics and rural sociology.

Mathematics majors can now take an option in actuarial science, which uses statistics to compute insurance risks and premiums.

The demand for such graduates has increased greatly in the past few years in South Carolina and neighboring states, says Claud B. Green, Clemson's dean of undergraduate studies.

The General Assembly passed a 1972 law requiring all insurance companies in the state to file a financial statement signed by an actuary. Actuaries are also in increasing demand in industry, state insurance departments and federal agencies, says Green.

The economics department will now offer a bachelor of science in addition to its bachelor of arts degree. The new degree emphasizes mathematics, managerial skills and applied economics.

The program offers "options," rather than a "minor," which are oriented toward emerging fields like urban studies and public administration. The curriculum also makes the transition to final college studies easier for students transferring from junior colleges and TEC centers.

The third new program is a bachelor of science degree in community and rural development. The curriculum, which focuses on problems of community development, economic growth and resource management, will provide professional personnel for industries and all levels of governmental agencies that are concerned with community and rural development programs.



MINUTES OF THE UNDERGRADUATE COUNCIL, MAY 3, 1974

The Undergraduate Council met in the Conference Room, E-103 Martin Hall. The following were present: Dean Claud B. Green (Chairman), Luther W. Baxter, Carolyn Briscoe, Lamar H. Brown, Bingham M. Cool, Arline Duvall, James C. Fanning, Ralph W. Gilchrist, Jerome V. Reel, Edward A. Vaughn, and Kenneth N. Vickery.

The minutes of the April 12, 1974, meeting were approved as distributed.

Dr. Baxter presented the revised report of the ad hoc committee on A Class Attendance Policy for Undergraduates at Clemson University. The report was approved as amended by the Council and is attached to these minutes.

College of Liberal Arts

The following courses were approved:

Engl	340	Black American Literature, 3 cr (3 and 0)
Engl	411	The Classics in Translation, 3 cr (3 and 0)
Engl	482	Special Topics in Literature, 3 cr (3 and 0)
Hist	198	Current History, 1 cr (1 and 0)
Hist	498/499	Studies in History, 3 cr (3 and 0)
Pol Sc	482	The Political Novel and the Cinema, 3 cr (3 and 1)
Russ	H101	Elementary Russian, 4 cr (3 and 1)
Russ	H102	Elementary Russian, 4 cr (3 and 1)
Russ	H201	Intermediate Russian, 3 cr (3 and 0)
Russ	H202	Intermediate Russian, 3 cr (3 and 0)

A PROPOSED CLASS ATTENDANCE POLICY

- (1) Regular and punctual attendance at all class and laboratory sessions is the responsibility of each student. College work proceeds at such a pace that regular attendance is necessary in order for each student to obtain maximum benefits from instruction. All absences are matters to be resolved between the instructor and the student. In the event that a student finds it necessary to be absent from a class, it is the student's responsibility to make up resulting deficiencies.
  - (2) In an early class the instructor shall inform the students of the attendance policy for that class. \* A student who incurs excessive absences may be dropped from a course by the instructor.
  - (3) Students desiring to withdraw from a class must secure a drop card from the Registrar's office prior to terminating attendance. A student enrolled in the last five weeks of classes shall have final grades recorded.
- \* Departments may establish uniform attendance policies for multiple section courses.

## ANIMAL SCIENCE

The following papers were presented at the annual meeting of the American Society of Animal Science, July 28-31, at the University of Maryland:

"Effects of Growth on Reproduction in Heifers," J. R. Hill, Jr. (Prof) and W. C. Godley (Prof).

"Immunization of the Ewe Against  $17\beta$  Estradiol," N. C. Rawlings (Visiting Instr), S. W. Kennedy (Ag Sci Assoc II), J. R. Hill, Jr., and D. M. Henricks (Assoc Prof, Food Sci).

"Estrous Control Using  $\text{PGF}_{2a}$  I. LH and Fertility," A. R. Ellicott (Asst Prof) J. R. Scoggins (former Grad Stu), J. R. Hill, Jr., and D. M. Henricks.

"Estrous Control Using  $\text{PGF}_{2a}$  II. Gonadal Hormones," D. M. Henricks, A. R. Ellicott, J. R. Hill, Jr., and J. F. Dickey (Assoc Prof, Dairy Sci).

## BIOCHEMISTRY

J. K. Zimmerman (Asst Prof) participated in the Gordon Research Conference on the Physics and Physical Chemistry of Biopolymers held July 1-5 at Holderness School, Plymouth, N.H.

J. K. Zimmerman presented a seminar to the Biochemistry Department at the University of New Hampshire, Durham, on July 3, entitled, "The Scanning Gel Chromatograph: Theory and Applications."

## CERAMIC ENGINEERING

G. C. Robinson (Prof and Hd) was elected Chairman of the Committee C-15 of the American Society for Testing and Materials at their annual meeting in Washington, D.C. on June 27. ASTM Committee C-15 is the technical committee charged with preparation of specifications, methods of test for manufactured masonry units including brick, concrete and preassembled masonry units.

## CIVIL ENGINEERING

J. Edwin Clark (Assoc Prof) attended an Engineering Foundation Conference at Franklin Pierce College in Rindge, N.H. The topic of the conference was "Assessment of Resources and Needs in Highway Technology Education."

## CHEMISTRY

John W. Huffman (Prof) and R. Pandian (Grad Stu) presented the paper, "Synthesis of ( $\pm$ )-Cacalol," at the meeting of the 9th Symposium on the Chemistry of Natural Products, sponsored by the International Union of Pure and Applied Chemistry (IUPAC), June 28 in Ottawa, Canada.

## CONTINUING ENGINEERING EDUCATION

A short course entitled, "Interactive Computing for Selected High School Students," will be presented from July 29 - August 9. The course is sponsored by the Department of Electrical and Computer Engineering. The course chairmen are Marguerite Kirsch (Inst, French) of the Department of Modern Languages and R. W. Snelsire (Assoc Prof) of the Department of Electrical and Computer Engineering. The course will be administered through Continuing Engineering Education.

A short course entitled, "Technical and Business Writing for Engineers," which was originally offered on June 20 will be repeated two other times in order to meet the requests of area industries. It will be presented on August 8 at Greenwood and again on August 12 in Greenville. The course is co-sponsored by the Department of Civil Engineering and the English Department. The instructional staff includes H. W. Busching (Assoc Prof and Hd) of Civil Engineering, C. O. Caskey (Assoc Prof) of English and Corinne Sawyer (Assoc Prof) of English. The course is administered through Continuing Engineering Education.

A short course for Building Inspectors will be presented August 13-15. Approximately 100 building inspectors from municipalities and state and federal agencies are expected to participate. The short course is co-sponsored by the Department of Civil Engineering of Clemson University and the Personnel Division of the State of South Carolina. The course chairmen are J. E. Clark (Assoc Prof) of Civil Engineering and William Baron (Assoc Prof) of Civil Engineering. The course is administered through Continuing Engineering Education.

## ELEMENTARY AND SECONDARY EDUCATION

R. K. Peden (Asst Prof) was elected Vice-President of the South Carolina Association for Health Education at its annual meeting in Myrtle Beach on June 27.

R. K. Peden was appointed to the Advisory Board of Directors for the Piedmont Branch of the South Carolina Lung Association.



## ENVIRONMENTAL SYSTEMS ENGINEERING

J. F. Andrews (Prof) has been awarded a \$11,893 grant by the Environmental Protection Agency. The grant will support a national workshop on "Research Needs for Automation of Wastewater Treatment Systems."

Heinrich Buhr (Assoc Prof, Chemical Engr, University of Cape Town, South Africa) has joined the Environmental Systems Engineering faculty for a one-year period effective July 1, 1974. Dr. Buhr is accompanied by his family and is on sabbatical leave from the University of Cape Town. While in Clemson, he will work with J. F. Andrews (Prof, ESE dept) on teaching and research in dynamics and control of wastewater treatment plants.

L. G. Rich (Prof) has been awarded a Certificate of Achievement by the Department of the Army for outstanding service as a member of the United States Troop Support Command Scientific Advisory Group from January 1972 to June 1974.

## HISTORY

John LeBourgeois (Asst Prof) has published "The Financial Crisis of William Morris" in the Durham University Journal, March 1974.

## UNIVERSITY COUNSELING CENTER

Dr. Fred Steele and John R. Anderson were participants in the Piedmont Summer Program at Winston-Salem, North Carolina on July 12, 13, and 14. The purpose of the program was to train persons in helping professions toward an understanding of group processes. A variety of techniques including Gestalt Therapy, Rational-Emotive Therapy, and Reality Therapy were demonstrated through experientially-based group situations.

## CALENDAR OF CAMPUS EVENTS

1-2 -- State 4-H Conference continues, Young Hall. Open to all 4-H members and agents. For further information contact the 4-H Office, Tillman Hall, 656-3420.

10 -- Graduation, Littlejohn Coliseum, 11:00 p.m.

## WEPR Highlights

South Carolina Education Radio Network programs produced at Clemson are aired by WEPR 90.1-FM, Greenville and WSCI, 89.3-FM, Charleston.

1&8 -- Poetry Today: (1) W.H. Auden - Limestone, (8) W.H. Auden - Bucolics, with Dr. Robert Hill and Gary Poster, Clemson English faculty. 12 Noon and 7:45 p.m.

2&9 -- Food For Thought: (2) Food and Nutrition, from the state 4-H Conference, (9) Cholesterol: Hero or Villain? with Dr. Don Turk, Associate Professor of Food Science, Marie Hindman, Clemson Home Economist. 12 Noon and 7:45 p.m.

2&9 -- Friday Lecture: Selected speeches from the Robert A. Taft Institute on Government seminar. 12:30 p.m.

2&9 -- The Time Has Come: (2) S.C. Arts Commission Poet-in-residence Dale Alan Bailes with Dr. Robert Hill on The Poetry in the Schools Program, (9) Harry Durham with George Chaplin, editor of The Honolulu Advertiser and Distinguished Alumni Award-winner, Clemson University. 1:30 p.m.

2&9 -- Majors and Minors: (2) Summer Music. Sowerby: All on a Summer's Day; Vivaldi: Concerto, Op. 8 No. 2, "Summer"; and works by Delius. (9) Four-part series on Music and the Military Life. 2:00 p.m.

3 -- Majors and Minors: Ending the series on Budget Labels. 10:30 p.m.

3&10 -- Political Science: (3) S.C. Political History, with Dr. Dan Hollis, USC, (10) S.C. Constitutional History, with William D. Workman Jr., editorial consultant with The State, Dr. Martin Slann, Clemson Political Science Department. 6:30 p.m.

5&12 -- Shakespeare Scene-By-Scene: Macbeth, with Dr. Ray Barfield, Clemson English Department, 11:00 a.m. and 9:00 p.m.

6&13 -- Music From The Mountains: (6) Mountain Music Family Style, part 2, (13) Mountain Music Family Style, part 3. 12 Noon and 7:45 p.m.

7&14 -- Environment '74: (7) Impact Statements, (14) Plutonium Recycling, with Henry W. Cheney, host, and R.E. Olson, Westinghouse Recycled Fuels Plant, Anderson. 12 Noon and 7:45 p.m.













